THE Soybean Digest

OFFICIAL PUBLICATION • AMERICAN SOYBEAN ASSOCIATION

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NOVEMBER • 1956

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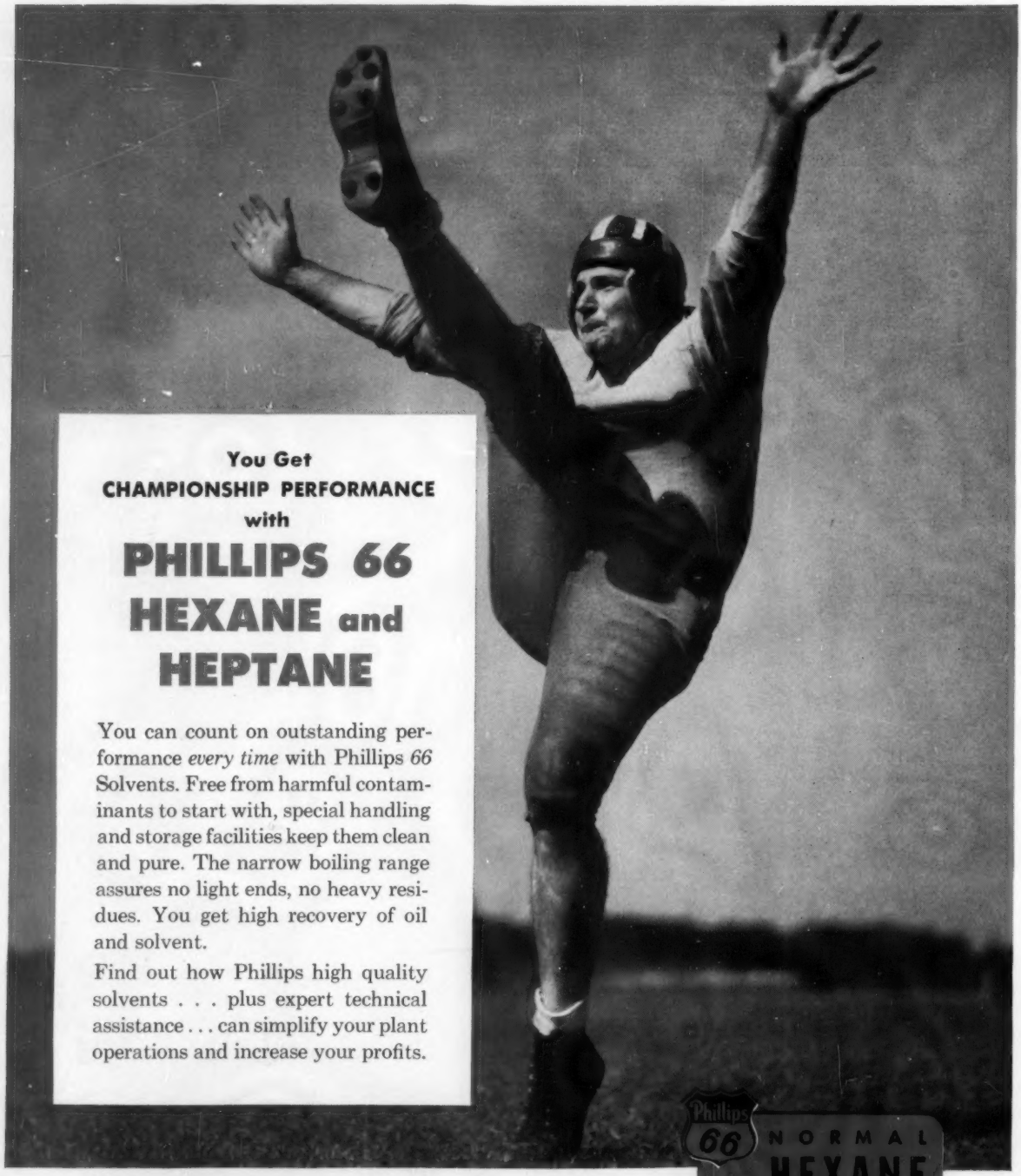

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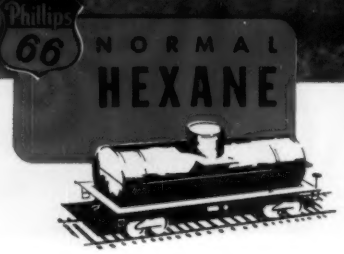

PHILLIPS PETROLEUM COMPANY
Special Products Division
Bartlesville, Oklahoma

VOL. 17 • NUMBER 1

THE Soybean Digest

REG. U. S. PAT. OFF.

HUDSON, IOWA

Vol. 17 • November, 1956 • No. 1

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THE SOYBEAN DIGEST

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Advertising, Ewing Hutchison Co., 35 E. Wacker Drive, Chicago 1, Ill.

Published on the 10th of each month at Hudson, Iowa, by the American Soybean Association. Entered as second class matter Nov. 20, 1940, at the post office at Hudson, Iowa, under the Act of Mar. 3, 1879.

Forms close on 25th of month preceding.

Subscription rates—$3 per year; Canada and other members of the Pan-American Union, $3.50; other foreign, $4. Single copies 30c. Subscriptions accepted from members only.

THE AMERICAN SOYBEAN ASSOCIATION

Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safe-guarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the industry.

EDITOR'S DESK

. . . By GEO. M. STRAYER

GOOD MOVE ON TAKEOVER POLICY Officials of the United States Department of Agriculture should be commended on the strong, forceful moves which were taken by that agency as the heavy soybean movement got under way. Among buyers, especially for export, there was expectation that huge stocks of soybeans would go into CCC hands, and that they could be purchased at fire-sale prices just as soon as the takeover date arrived. Buying was being held off in anticipation of these distress prices.

Announcement that there will be no fire sales on soybeans between the May 31 takeover date and Oct. 1, and that another look will be taken on next Oct. 1 and policy from that date forward decided then, immediately injected confidence into the market. It was a wise move, and well-timed. Market prices reflect the confidence instilled.

Purchases of oil since that announcement indicate the degree of confidence restored to the oil market. Forward commitments on soybeans for export indicate the same thing.

There is no surplus of fats and oils in world markets. We happen to have the world's largest available exportable supplies. We disposed of cottonseed oil stocks in government hands at cheap prices only a few years ago. Buyers anticipated similar moves on soybeans or soybean oil. Now that it has become plain such prices are not going to prevail buyers will continue to step into the market to fill actual and anticipated needs.

It begins to appear entirely possible we may dispose of the major portion of the huge 1956 soybean crop at prices more favorable than those prevailing on the 1955 crop which was 100 million bushels smaller. We can do so, with a minimum of carryover on Oct. 1, 1957, if we will continue to market the crop in orderly fashion.

SEND U. S. FATS TO SATELLITE COUNTRIES? Five days before the outbreak of hostilities in Warsaw, Poland, your editor was in that city. Also in Czechoslavakia and East Germany. It was my first visit behind the Iron Curtain. Previously I had talked with many people who have fled from that section of the world. Now I have seen for myself.

When we were in Warsaw it was easy to sense tension and hostility. You knew something was going to snap—but not when nor where. You knew you were dealing with people who had once tasted freedom and self-government, and you felt sure they were again going to have it.

Food is neither plentiful nor cheap. Fats and oils apparently are in great demand—and high priced. Soybean oil and lard would be mighty welcome in their economies.

I pose as no expert in international affairs, nor in U. S. foreign policy. I do feel that the explosions in Poland and then in Hungary are the first two of a series of such uprisings by the oppressed peoples of the satellite countries. Others will follow through coming weeks and months. Peoples can be subjugated for a while, but eventually they acquire the strength and the will to throw off the yoke.

I would venture a guess that the United States will in no way intervene with military goods or assistance and that foodstuffs, and especially fats and oils, could well be sold or given to those countries as a means of gaining their friendship and supporting their own efforts toward self-government. In a country where the annual ration of coal for an entire family is 1,200 pounds, and where the winters are comparable to those here in our Midwest area, it takes a lot of fat to keep a man warm!

ORDERLY MARKETING PAYS OFF If the harvesting of the 1956 soybean crop has demonstrated any one thing it is the value of orderly marketing. With a crop 100 milion bushels larger than any ever produced in history, and with soybeans selling at very close to the support price levels, farmers have placed their crop in storage in unheard-of quantities.

As a result we have favorable prices for soybeans, and for soybean oil. We have soybean oil meal selling at prices which should move it in quantities never before known.

Had soybeans been dumped on the market at harvest time we might well have seen chaos in the soybean, oil and meal markets. In those areas where storage, either on farms or at local elevators, has been available the soybean producer will reap healthy rewards for storage. And in so doing he has stabilized the entire market, created confidence on the part of buyers, and made it known that soybean supplies are available through the year at reasonable prices.

Stability seems to have arrived in our industry. It is a healthy situation. Let's work toward its continuance.

—Soybean Digest Photo

POOR ROTATIONS and not the soybean crop alone may be the cause of poor yields and soil conditions. Soybean field on L. M. Fielder farm, Greene County, Iowa.

SOYBEAN ROTATIONS

Soybeans are often the victims of poor cropping systems, not the cause of rundown soils. A roundup of typical rotations in many of the soybean growing states.

(Staff Written)

D. F. BEARD, now with the U. S. Department of Agriculture but formerly with the Ohio Experiment Station, has called attention to the value of even the simplest rotation in producing higher yields.

Over a 15-year period in Ohio continuous corn and continuous soybeans were compared with alternate corn and soybeans, and also a corn-soybeans-wheat (clover) rotation.

The average yield of corn in continuous corn was 27 bushels per acre; that of continuous soybeans 13 bushels.

Where corn and soybeans were planted on the same ground in alternate years the yield of corn was 55 bushels; of soybeans 18 bushels.

But in the corn-soybeans-wheat (clover) rotation the corn yield was 67 bushels; of soybeans 21 bushels.

A standard rotation includes the following:

1—Row crops.

2—Close-growing grain crops.

3—Deep-rooted legume and sod crops.

The soybean is a legume, but it should be treated as a row crop in the rotation. Most of its reputation as a soil robber and contributor to erosion comes from the failure to recognize this fact and from trying to make it do service as a legume.

Soybeans should not replace clover or alfalfa. They are a row crop, but they are far from the worst of the lot in causing soil depletion and erosion.

Say Beard, E. P. Reed and J. A. Slipher in Ohio Bulletin, Putting Soybeans into Permanent Farming:

"The soybean needs social standing. It needs a rotation with respectability. Sandwiching it in between two or three other more soil degrading crops (common practice) accounts for an unsavory reputation.

"Soil productivity suffers chiefly due to the heavily degrading crops, not because of the ill effect from the soybeans, as commonly supposed. The soybean member itself is only a mild contributor to the total delinquency.

"Dropping out the soybean member does not correct the ill effect of these cropping systems."

But while soybeans should not be used to replace sod crops such as clover or alfalfa, they may be the best substitute for them in case of failure of the sod crop, the National Soybean Crop Improvement Council points out.

Cornbelt Rotations

The Council lists the following reasons why soybeans are well suited to Cornbelt rotations (some also apply to other areas):

1—They have an inherent ability to use plant nutrients other crops in the rotation are unable to get.

2—They are useful in corn borer control. Where soybeans follow corn the cornstalks are plowed under completely and the borers destroyed before planting the soybeans. They may also aid in controlling corn rootworm and other soil insects affecting corn because the usual time between corn crops is lengthened by adding soybeans.

3—Since soybeans are a legume they do not lower the soil nitrogen supply.

4—Soybean stubble provides a good seedbed for the small grains following with a minimum of preparation.

5—They exert a beneficial effect on other crops in the rotation.

States the Council: "Increasingly, small grains are showing the need for nitrogen when they follow corn with its high nitrogen demands on the soil. Soybeans, by improving the tilth and increasing the biological activity and nitrate nitrogen in the soil, are a more logical crop to precede the small grains. The soil is left loose and friable and is an ideal seedbed, requiring only enough preparation to permit covering the seed." Iowa data tend to bear out this point with respect to better small grain yields.

6—The same equipment as for

. . . Nearly everybody agrees soybeans do something for the soil

other crops can be used.

7—Early varieties permit planting of a fall cover crop.

8—They offer a ready means of adjusting surplus grain acreage.

9—Soybeans are the best pinch hitter on the farm. They can be put in when the clover crop fails, when something happens to a corn stand, or when it is too late to plant other crops.

Concerning the beneficial effect of soybeans on the crop following, J. F. O'Kelly, agronomist at Mississippi State College, states: "Nearly everyone agrees that a crop of soybeans does something to the mechanical structure of the soil which makes seedbed preparation for another crop easier than it would otherwise be. But no one has yet assessed the value of this benefit."

Longtime tests at the Purdue University Experiment Station show that small grains yield better if sown on soybean stubble than if following corn or other small grains, according to K. E. Beeson and A. H. Probst, Purdue agronomists.

They say small grains require about one-third to one-half as much nitrogen as corn. The residue of the soybean crop—roots, leaves, stubble, etc.—supplies a part of the nitrogen need of small grains as soon as nitrification begins in the spring.

Probst and Beeson recommend a winter grain cover crop following soybeans to control erosion. All grains respond to soybean stubble as a favorable seedbed and as a source of organic nitrogen during the late spring.

On most soils, wheat can be drilled into soybean stubble with little or no disking, say Beeson and Probst. The more a soybean stubble is worked, the poorer the seedbed may become for wheat.

Early to midseason soybean varieties provide a better opportunity for timely seeding of the small grain following than do full-season varieties. Also, you get better yields of the small grain following than from full-season varieties.

But I. M. Roberts (now with Victory Soya Mills, Ltd.) and G. P. McRostie of Ontario Agricultural College say that in Ontario soybeans may either follow or precede corn, depending entirely on the farmer's preference.

On the average soybeans yield best after fall-plowed sod, but corn and small grains both yield best following soybeans.

Roberts and McRostie point out, however, that the planting of winter wheat after the soybean harvest is an excellent practice on rolling land to stop erosion. But, they say, winter wheat can't immediately make use of the nitrogen residue from soybeans. Therefore, on some soils a fertilizer containing nitrogen should be applied when planting wheat.

Roberts and McRostie also emphasize that soybeans should be considered a "secondary," not a primary legume in the rotation and should not replace clover or alfalfa.

Following are some of the rotation patterns followed in various parts of the soybean belt:

Ohio. Soybeans may replace corn in the rotation on Ohio gray lands, of sluggish internal drainage, of smooth to mildly sloping topography (less than 4 percent slope), according to Reed, Slipher and Beard.

They suggest one of the following rotations:

Soybeans-oats-winter grain (clover seed).

Soybeans-oats (clover seed)- winter grain.

Soybeans-oats (clover seed).

With these sequences equipment needs are simplified to one machine for harvesting. Harvesting periods can be comfortably spaced and each crop requires a small work crew.

Certain light brown soils in Ohio have imperfect internal drainage, very mild slope and are generally associated with the gray soil. If soybeans would relieve these soils of part of the burdensome corn acreage it would result in substantial benefit to soil productivity. The Ohio men suggest a split cropping pattern:

Soybeans or corn-small grain-legume sod-legume sod, or

Soybeans or corn - small grain - legume sod.

If the sum of soybean and corn acreages on these "intermediate" Ohio soils exceeds one-third of the rotation the soil will suffer and yields of all crops lag.

In Ohio, only the dark lands, the corn soils, are capable of the burden of growing soybeans in sequence with corn. Even there the practice must be counterbalanced by an added year of some soil building crop in the rotation.

Reed, Slipher and Beard recommend that 40 percent of the crop land be devoted to corn or soybeans, 20 percent to small grains and 40 percent to sod.

They say matching corn and soybeans year for year assures rising productivity of the soil as the input of organic matter will exceed the outgo. Three of the crop years favor tilth renewal to offset impairment during the two years when the land is in corn and small grain. Lopping off the second year of sod will weaken the capacity of the rotation to keep the land up.

Indiana. Probst and Beeson say that on most soils soybeans follow corn and precede small grains for

. . . Every other year in the rotation is too often

best results. They suggest as a good rotation for livestock farms:

Corn (one or more years)-soybeans-small grain-hay, pasture mixture.

For grain farms:

Corn (one or two years)-soybeans-small grain-sweet clover or other legume intercrop or clover as a seed crop.

For overflow river and creek bottoms:

Corn-soybeans.

For southern Indiana:

Corn-soybeans-wheat (or other winter grain)-legume, grass mixture, or

Soybeans-wheat-soybeans.

Soybeans following soybeans are not good on most soils.

Minnesota. "We have not attempted to set up rotations in which we have tried to find the best location for the soybean crop," writes A. C. Caldwell, associate professor of soils at the University of Minnesota.

As a general practice soybeans are planted following one or more years of corn so they may take the place of one corn crop in the rotation or lengthen the rotation by one year to incorporate a soybean crop.

Nebraska. Soybeans have not yet found a stable place in the rotations on most Nebraska farms, according to Donald G. Hanway, University of Nebraska agronomist. The Nebraska acreage was very small until a few years ago.

Rotations include:

Corn-soybeans-corn.

Corn-soybeans-corn-oats (sweet clover).

A few farmers are trying corn-soybeans-wheat in place of corn-oats-wheat because oats have become unprofitable. And a few are alternating two rows of soybeans with two rows of corn in the same field.

Illinois. "For eight years at Urbana we have compared a corn-soybean rotation with a corn-soybean-wheat-hay rotations," states A. L. Lang, professor of soil fertility at the University of Illinois. "After eight years of this rotation, soybeans are very little better where they appear in the rotation every other year with heavy fertilizer treatment than they are without any treatment at all. This indicates that with what information we have at the present time, having soybeans occur in the rotation as often as every other year is unsatisfactory from the standpoint of yields."

The poor yields resulting from having soybeans in the rotation every other year may be the result of poor physical condition or disease or insect damage, although this is not proved, says Lang.

"In the cropping system where beans appear no oftener than once every four years they are responding well to fertilizer practices and soil amendments designed to build up the general productivity of the soil," states Lang. "A similar comparison has been in effect on the Oblong Soil Experiment Field in Crawford County for a number of years where corn and two years of soybeans are compared with other cropping systems not having soybeans in the rotation.

"In this cropping system where the land has been continually grown in a cultivated crop, we have had good increases from application of nitrogen on corn. We have not been able to increase yields to the same degree that we have where a deep rooting legume such as sweet clover or alfalfa has been introduced into the rotation either as a catch crop or as a stand over hay crop.

"This again tends to support the idea that perhaps soybeans should not occur too often in the cropping system particularly in relation to another cultivated crop. **The problem may be one of too much soil cultivation.**

"Soybeans in our work have proved to be a better crop to follow by small grain than non-legume cultivated crops. Likewise, soybeans make it possible to prepare seedbeds for following small grain crops more economically than is the case with a crop like corn."

Iowa. States John T. Pesek, department of agronomy, Iowa State College: "Although the rotations at the Iowa Experimental Station were not set up to measure the advantage of any particular position in the rotation for soybeans, certain observations can be made with respect to the rotation effect on soybean yields, and the effect of soybeans on the yields of other crops. Comparisons can be made at four locations in the state.

"Near Albia in Monroe County soybeans have been grown in two different rotations in the same experiment since 1949. The fertility level of the field is moderate to high and the soybeans in a corn-soybean-oats-meadow rotation have averaged 1.2 bushels per acre more than those in a corn-corn-soybeans-oats (with sweet clover catch crop) rotation.

"In two experiments on the same field near Bloomfield in Davis County the soybeans in a corn-soybean-oats-meadow rotation have averaged about 1.4 bushels per acre more than those in a corn-soybean rotation the past four years. Adding eight tons of barnyard manure per acre ahead of the corn every four years in these two rotations has increased the bean yields two bushels per acre in the four-year rotation, while no such increase was obtained in the two-year rotation. The experiments have not continued long enough to attach unusual significance to the manure effect in the latter case.

"On the Howard County Experimental Farm near Cresco, Iowa, the soybeans in a corn-soybean rotation in one experiment yielded the same as those in a corn-soybean-oats-meadow rotation in another experiment. Less significance can be attached to this since the sites differ considerably more than at the Davis County location above. Adding eight tons of manure ahead of the corn in the latter rotation has increased bean yields 1.2 bushels over the past seven years.

"At Ames in Story County it has been found that oats following soybeans yielded 6.1 bushels per acre or 8.9 percent higher than those following corn in four-year rotation of corn - soybeans - oats - meadow and corn-corn-oats-meadow. Earlier work has shown that with beans in the position of the first year crop following meadow in the above rotation, the corn following beans yielded 7.4 bushels per acre or 9 percent more than the corn following corn. In the rotation experiment in Howard County the oats following soybeans have averaged only 1.9 bushels higher than those following corn over an eight-year period.

"It must be pointed out that the information is still incomplete since, in most cases, not more than two cycles of the rotations have been completed.

"A rotation often seen in the more level areas of north central Iowa is one of corn-soybeans-corn-oats-meadow. This enables the farmer to get the benefit of fall plowing for each crop of corn every year. The other advantage is that the rotation is a high-cash rotation because of the percentage of grain in it. Furthermore, the benefit of the nitrogen-sparing effect of soybeans is awarded the corn crop which usually can make better use of the extra soil nitrogen than oats."

South. O'Kelly states it is still the practice where possible to grow cotton after cotton in the South, since cotton is usually planted on the soils best adapted to it. And continuous cropping with cotton aids in weed control.

With cotton acreage reduction the soybean acreage probably will increase and to some extent soybeans may be worked into a rotation with cotton. But O'Kelly says this will mean a greater weed problem.

Tennessee. There is no typical

pattern of rotation in Tennessee, according to L. N. Skold, associate agronomist at the University of Tennessee. Soybeans compete with cotton and corn as a row crop and are frequently grown on fields more or less continuously in row crops.

Small grains may follow soybeans, but only to a limited extent.

Maryland. The most prevalent rotation in the soybean-producing area of Maryland is corn-soybeans, according to Robert C. Leffel, research agronomist at the U. S. Department of Agriculture field crops research branch at Beltsville, Md.

A rotation used fairly frequently on the lower eastern shore of Maryland is corn-small grain-soybeans.

The third most frequently used rotation is soybeans-small grain-hay.

Some farmers use a winter cover crop of rye or rye grass.

Alabama. Some 100,000 acres are planted to soybeans in the Gulf counties of Baldwin, Mobile and Escambia. According to Otto Brown, superintendent at the Gulf Coast Sub-Station at Auburn, the biggest portion of the beans is planted behind early truck crops such as potatoes, cucumbers, sweet corn and other truck crops. Where beans do not follow a truck crop the general practice is to use around 500 pounds of 4-10-7 fertilizer at planting time.

Mississippi. Shortly after the soybean was introduced into Mississippi it was recommended that it be drilled with corn for soil improvement, according to O'Kelly.

But there is no information to support this procedure and efforts to develop it have been negative. Some beans are still grown in corn but the practice in the hill areas has declined markedly during the past 10 years.

Virginia. M. P. Lacy, assistant extension agronomist at the Virginia Polytechnic Institute, reports the following are some of the rotations in Virginia in which soybeans are used:

Soybeans-wheat. A double one-year rotation in which both wheat and soybeans are harvested from the same land each year.

Corn-wheat, soybeans, rye grass, crimson clover.

Corn, rye grass on small grain cover crop-soybeans-wheat, lespedeza hay, crimson clover and/or small grain cover crop.

Corn-wheat, red clover-red clover-soybeans.

Corn, rye grass cover crop-peanuts, small grain cover crop-soybeans.

Corn-soybeans.

damage over the entire state and some trouble from shattering and

AMERICAN SOYBEAN ASSOCIATION

Late News

Hudson, Iowa
Nov. 6, 1956
Vol. 4, No. 25

Published 32 times yearly as a service to the soybean industry.

Possible effects of recent developments on the market for U. S. soybeans:

1—U. S. fats and oils could be made available to Eastern European countries that may break way from communism.

2—Trouble in the Suez Canal zone could prevent Asiatic fats and oils from getting through to Europe and thus increase the market for our products.

REPORTS ON EXPORTS

American Soybean Association Executive Vice President Geo. M. Strayer has returned to the United States after 3 weeks in Europe predicting that U. S. soybean and other oils may be sent to satellite countries that break away from Russia.

Strayer left Poland just a few days ahead of the governmental upset. He says the **Poles are sadly short of fats and oils** as well as other foods. See his report on page 4.

It is reported that a P. L. 480 agreement with Italy involving some 57,000 metric tons of vegetable oils has been approved.

The U. S. Department of Agriculture announced on Oct. 26 issuance of an authorization to Spain to finance the purchase from U. S. suppliers of up to $22.2 million worth of cottonseed and soybean oils. This was under the P. L. 480 agreement between Spain and the United States announced Oct. 23.

The authorization provides for purchase of approximately 56,700 metric tons of cottonseed or soybean oils basis salad oil in drums. Shipments will be made between Nov. 2 and next June 29.

A total of 5.8 million bushels of soybeans was inspected for overseas export and shipped to Canada in the Oct. 1-19 period, **almost exactly the same amount as last year.**

The last of October 6.2 million bushels of soybeans were scheduled to be loaded out of the Port of New Orleans for export in the Oct. 26-Nov. 10 period, according to W. L. Richeson & Sons, freight brokers.

HARVEST REPORTS

Combining was over in the North except for a few spots and was moving along in the south in late October. Keith Bilbrey, county agent, Blytheville, Ark., reported the harvest about over in north Mississippi County, Ark.

H. V. Latham, Latham Seed & Equipment Co., Belhaven, N. C., reported only 1% of the crop was combined in eastern North Carolina and that even with no more rain it would be another week before combining could start. Wet, humid weather will be a grade factor there.

Harvest was just getting under way in some areas in South Carolina in late October. Large acreages of soybeans were ready for harvest in Virginia but unfavorable weather was preventing field work. There was some damage from lodging in Virginia.

REPORTS ON YIELD

Quoting Bilbrey at Blytheville, Ark.: "Three straight years of excessive **drouth have hurt soybean yields here and made them unprofitable on a great many farms. The shift is very strong to barley and wheat.** O. H. Acom, Wardell, Mo., reports a very short bean crop. He says many fields in Pemiscot County and farther south made only 8 to 15 bushels per acre due to drouth and hot weather.

J. Ross Fleetwood at the University of Missouri reports drouth

damage over the entire state and some trouble from shattering and cracking. Disease was serious in the southeast Delta area, he says.

Calvin Heilman, Kenton, Ohio, says drouth hurt beans in his area more than most farmers realized before harvest, with final yields about the same as for 1955.

STORAGE OF CROP

A private check with cooperative elevators in Iowa indicates that 18% of the Iowa soybean crop has been sold. Farmers stated they are holding for prices ranging from $2.15 to $2.40 and averaging $2.15.

Glenn Pogeler, North Iowa Cooperative Processing Association, Mason City, says 20% of the crop was sold outright in his area, with lots of beans going under the loan. "Any further price rise will cause selling."

Latham at Belhaven, N. C., says farmers are not disposed to store soybeans at present prices in eastern North Carolina. Tyler Terrett, West Tennessee Soya Mills, Inc., Tiptonville, Tenn., reports about 25% of the farmers are completing government loans on their soybeans in his area. Acom at Wardell, Mo., reports about one-half of the soybean crop has been sold in Pemiscot County.

Heilman at Kenton, Ohio, writes 10% of the crop there has been sold and growers have a "waiting attitude" toward the support program.

FAVOR CHECK-OFF

Black Hawk County (Iowa) Farm Bureau members voted in favor of a voluntary check-off on soybeans 444 to 120. In the same poll the county group opposed a new plan to promote meat through a check-off on cattle, hogs and sheep. Other Iowa counties have been polled on the same questions, but the results are not yet available.

OIL CONTENT IS LOW

Pogeler at Mason City, Iowa, reports very poor average oil content on this year's crop—1% to 1½% below last year. He says the low oil content should make for about 3,000 fewer tanks of soybean oil than originally intended. He calls the quality of the crop excellent except for oil content.

Some Southern processors are reported at work on soybeans earlier in the season than usual due to small cottonseed supplies.

Soybeans, No. 1 yellow, Chicago, bu.	$ 2.37½
Soybean oil meal, Decatur, ton	47.00
Soybean oil, crude, Decatur, lb.	.12⅝

	Cash price to farmers for No. 1 soybeans Oct. 29	Cash price to farmers for No. 2 soybeans Oct. 29	Retail cash price for bagged soybean oil meal Oct. 29
Ark.	$2.20		
Ill.	2.17@$2.19		$65
Ind.	2.13		67.50
Iowa	2.15		68
Kans.		$2.11	65
Minn.	2.14		
Mo.	2.20@ 2.22		
N. C.	2.18		
Ohio	2.13		
Okla.	1.95	1.95	70

Growth Problems of the

than production of edible fats. There is pressure for better diets in many countries.

Growth Problems of the Soybean Processing Industry

Increased consumption of protein by the livestock industry seems likely. Continued exports of oil are needed to maintain an expanding crop

PART I

By T. A. HIERONYMUS

Associate Professor, Agricultural Marketing, College of Agriculture, University of Illinois, Urbana, Ill. At National Soybean Processors Association annual meeting, Aug. 13, 1956, Urbana, Ill.

STATISTICAL forecasts are systematic extensions of past interrelationships of events and facts. This is true whether the forecast is of prices, the weather, or horse races.

Some times principles can be evolved from specific statistical studies and applied to other situations. For example, experience with price forecasting might lead one to conclude that as the quantities of soybeans to be crushed increase the crushing margin will widen and, as new record crushes are established, margins will be very wide indeed. Such does not seem to be the case. To my subsequent sorrow, I have put this kind of thinking into soybean price forecasts.

If we forecast the future of the soybean processing industry we find that on the basis of recent history (a) new record volumes will be crushed each year, (b) crushing margin will continue to decrease, even becoming negative, and (c) most processor's balance sheets will continue to show sizable profits!

This apparent anomaly is sufficient proof that the processing industry has some interesting problems. The more interesting of the problems are of a long range nature.

Long range outlook. The long range outlook for the soybean processing industry depends on the volume of production of soybeans. If the soybean crop continues to increase in size the industry will expand and prosper. If on the other hand the current level of production cannot be maintained, the crushing industry will decline. Yours is a service industry and your long range success or failure depends mainly on factors beyond your control. You can affect volume to a degree by the quality of the service that you render. However, other factors will affect the ultimate size of the soybean crop much more importantly.

Long range production of soybeans depends on the size of the markets that can be developed for soybean meal and soybean oil and on alternative uses of production facilities.

Rapid expansion of the soybean crop has been made possible by expansion of the markets for the two products. Growth curves of the type that have existed for these two products over the past 25 years cannot continue indefinitely. It would be a mistake to project growth at the current rate. At the same time, it should be remembered that large increases in the past have been absorbed with ease.

Soybean Meal Study

During periods of rapid growth, a continual appraisal of the status of markets needs to be made. Some conclusions of a recent study[1] of the market for soybean meal are: "The quantity of high-protein feeds fed has increased significantly relative to other concentrates since the end of World War II. These increases in the proportion of high protein feeds in livestock rations have been associated closely with increases in the production of livestock products per unit of concentrate feed fed."

"Much less protein is fed to livestock than is needed for balanced nutrition. The protein deficit is probably greatest with respect to hogs. Some classes of poultry are also fed less protein than is needed for balanced nutrition."

"Whether or not it would be economically feasible to overcome the protein deficit in livestock rations is subject to question. The record of performance of broiler and turkey producers indicates that it pays to feed adequate amounts of protein of the right quality. The limited data available indicate that it would pay hog producers to eliminate at least part of the protein deficit in hog rations."

"Supplies of the 11 principal high-protein feeds have increased relative to supplies of feed grains since 1935. During that same period, prices of these feeds have increased relative to prices of feed grains."

"Mixed feeds have been the most important means by which the high-protein feeds have been moved into consumption. As the volume of mixed feed production has increased, the mixed feed industry has increased in importance as a market outlet for high-protein feeds. The use of soybean meal by the mixed feed industry has increased relative to the use of other protein feeds. The quantity of soybean meal used in mixed feeds exceeds, by far, that of any other single high-protein feed."

"Further increases in the production of mixed feeds seem likely. It also seems likely that the mixed feed industry will require increasing quantities of natural protein feeds of the quality of soybean oil meal."

One additional factor needs to be mentioned in connection with the market for meal: there are limits to the rate of expansion. Even though the market may ultimately absorb the meal from as much as 1,000 million bushels or more soybeans, the increase in any one year is limited. Increases in meal usage depend on educating the farmers and on the rate of increase of livestock numbers.

Soybean meal is approximately the equivalent of corn on a TDN or net energy basis. It is difficult to visualize meal prices below the price of corn *at the farm level.*

Export Market for Oil

We are dependent on the export market for soybean oil. Several things indicate that the U. S. export market will continue to expand. World production of edible fats per capita is still below prewar levels. Population outside of the United States appears to be increasing faster

than production of edible fats. There is pressure for better diets in many countries.

The very low dietary levels in Asia indicate that exports from this region will not be restored to prewar levels. The huge increase in U. S. exports that has accompanied the expansion of the soybean crop has been offset largely by a decrease in Asia.

Price Important

Price policy is of singular importance in maintaining or expanding exports. We have only recently concluded an experience in price policy that should have driven the lesson home for all time. From 1951 to early 1954, under the cottonseed support program, fats and oils were priced out of world markets and huge inventories were built up. Since February 1954 these products have been priced in line with world prices and the "surplus" has disappeared. It recently looked as if a real scarcity had developed. Prices recovered to the highest level since before the support program was undertaken.

If we are to continue to produce soybeans at current or expanded levels we must continue to export oil. This can be done only so long as oil sells at prices that consuming nations can afford to pay and at prices that will discourage the expansion of production elsewhere.

The cheapness of U. S. fats has probably been a factor in the failure of production to expand outside of the United States.

The price support programs for the so-called basic crops have been an important factor in soybean production. Acreage control is a basic feature of the support programs for these crops. Much of the land diverted from these crops has been used to expand soybean production. This has been true since the beginning of the price support program in the early 1930's.

These considerations raise some interesting questions. Will controls continue to aid the expansion of the soybean crop, or will the soybean crop itself get caught up in the web of controls? The increased support price for the 1956 crop was a step in this direction. Will support prices and limitations on production of other crops be reduced? If they are, what will be the effect on soybean production? I do not know the answers to these questions but consider it unlikely that soybean acreage will be reduced in the near future. Further expansion, but at a reduced rate seems more likely.

Much of the increase in soybean acreage has been at the expense of corn. The 1956 corn acreage is the smallest in over 50 years. Even so we are producing feed faster than we are using it. Hogs normally have used over one-half of the corn produced. Pork and lard are falling into consumer disfavor. The per capita consumption of other animal products has been increasing rapidly, that of pork has been barely holding its own. The price of pork relative to beef is declining.

DIETARY SHIFT away from pork is taking place in the United States. What effect will this have on the processing industry?

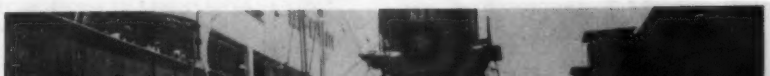
These considerations raise a basic agricultural question. Do we have any reasonable use for the current level of corn production? It appears that we can get rid of it at prices moderately below prevailing prices. Further increases in technology relative to population will pose difficulties.

Population has doubled in the past 50 years but no new agricultural lands have been added. Each year our people have been better fed and we have been increasingly plagued by abundance rather than shortage. Technological advances are more apt to accelerate than to slow down.

Improving technology adds stress to the importance of price policy. If technology improves more rapidly than demand increases, prices or production must be reduced. Thus far the soybean industry has priced soybeans and their products to sell. If farmers understand the consequences of price supports that are too high, they will keep soybean production free of control. If they have to cut soybean production they will have to switch to forage production. It would take very low soybean prices to make such a shift desirable.

(To be continued)

varieties from Japan and the USA are being introduced. Yields exceeding 2,000 kilograms per hectare



Soybeans in Taiwan

One of the better fed areas of the Far East, Taiwan offers a market for U. S soybeans, which are converted to human food and animal feed

By RALPH N. GLEASON

Chief, Food & Fertilizer Division, Sino-American Joint Commission on Rural Reconstruction.

THE CHINESE have an ancient saying, "Tsing tsai tou fu tang, Sze chi pao an kang," which literally translated means "Fresh vegetables beancurd soup, Four seasons guarantee safety health." In America we would probably say, "Fresh vegetables and beancurd every day will keep the doctor away."

I have heard Chinese say that soybean is the meat and oil of the poor people. I have tried to reduce this to an old Chinese saying but there seems to be none. My Chinese colleagues say that it is a fact but to their knowledge there is no such old saying.

After several years in the Orient one comes to appreciate the full and deep meaning of these statements and to respect the soybean as a major factor in the people's livelihood. However, Taiwan (or Formosa as it is better known in the Western world) is one of the better fed areas of the Far East, and conditions may not be truly representative of the region as a whole. In Taiwan, pork

Ralph N. Gleason

is consumed in substantial quantities averaging annually about 16 kilograms per person or about the same quantity as all pulses, nuts and oilseeds consumed. Also, lard is as important a source of oil and fat as are soybeans and peanuts.

As a Food

The soybean contains about 18% oil and 35% protein and also is a good source of certain vitamins and minerals. Table 4 reveals the total availability of pulses, nuts and seeds in Taiwan, the percent of total nutrients provided from that source and the availability of vegetable oil per person per year.

Although the soybean may not be as important a food item on Taiwan as in some other Far Eastern countries it, along with peanuts and other pulses and oilseeds, still provides around 10% of the total protein, close to 20% of the total calcium, about 10% of the total phosphorus and 10% or more of the iron and vitamins B-1 and B-2. It also provides approximately 50% of the total oil and fat which is consumed.

Production Increasing

The production of both peanut and soybean in Taiwan is increasing. However, it seems that future prospects are more favorable for peanuts than for soybeans. The main reasons are that climatic factors on Taiwan are more suitable for the growth of peanut and the people customarily prefer peanut oil to soybean oil.

The soybeans now grown are badly mixed "native" varieties. Yields are low (seldom reaching 700 kilograms per hectare), as Table 2 will show. However, variety improvement work was started about 3 years ago. Single plant selections are being made from farmers' fields for trial and new

TABLE 1. DISPOSITION OF SOYBEANS

Unit: metric ton

	Manufacture								Food				Grand Total		
		For oil production			For soya products										
Period or year	Seed	Local production	Imports	Sub-total	Local production	Imports	Sub-total	Total	Waste	Local production	Imports	Sub-total	Local production	Imports	Total
1935-39 avg.	330	356	28,899	29,255	2,849	5,419	8,268	37,523	120	356	1,806	2,162	4,011	36,124	40,135
1940-44 avg.	279	293	....	293	2,342	....	2,342	2,635	99	293	....	293	3,306	....	3,306
1945	370	153	....	153	1,223	....	1,223	1,376	58	153	....	153	1,957	....	1,957
1946	423	356	....	356	2,854	....	2,854	3,210	123	357	....	357	4,113	....	4,113
1947	391	920	....	920	7,365	....	7,365	8,285	297	921	....	921	9,894	....	9,894
1948	1,018	1,105	4,778	5,883	8,839	896	9,735	15,618	373	1,105	299	1,404	12,440	5,973	18,413
1949	1,014	1,067	8,155	9,222	8,541	1,529	10,070	19,292	362	1,068	510	1,578	12,052	10,194	22,246
1950	1,015	1,115	29,054	30,169	8,922	5,447	14,369	44,538	376	1,115	1,816	2,931	12,543	36,317	48,860
1951	1,163	1,184	41,082	42,266	9,478	7,703	17,181	59,447	402	1,185	2,568	3,753	13,412	51,353	64,765
1952	1,216	1,297	75,788	77,085	10,378	14,210	24,588	101,673	439	1,297	4,737	6,034	14,627	94,735	109,362
1953	1,411	1,549	72,817	74,366	12,394	13,653	26,047	100,413	523	1,549	4,551	6,100	17,426	91,021	108,447
1954	1,502	1,820	66,722	68,542	14,559	12,511	27,070	95,612	609	1,820	4,170	5,990	20,310	83,403	103,713
1955	1,726	2,170	68,955	71,125	17,361	12,929	30,290	101,415	724	2,170	4,310	6,480	24,151	86,194	110,345

Source: Food & Fertilizer Division, Joint Commission on Rural Reconstruction. Date: August 1956.

available stocks to meet food and

TABLE 4. AVAILABILITY OF PULSES, NUTS, AND SEEDS AND VEGETABLE OIL IN TAIWAN

varieties from Japan and the USA are being introduced. Yields exceeding 2,000 kilograms per hectare have been obtained on test plots in certain areas.

As Fertilizer

Taiwan's production of soybeans does not meet the local requirement. The normal source of supply of imported soybeans and soybean products was the mainland of China, especially Manchuria, prior to its fall to the communists. In those days large quantities of soybean cake were used as fertilizer, either directly applied to the land or as a major ingredient of mixed fertilizer. Table 3 shows a peak usage in 1934 of 228,161 metric tons. During the period 1932 to 1936 annual consumption exceeded 200,000 metric tons.

As the Pacific War developed and shipping became scarce, however, the quantity used dropped below 200,000 metric tons a year during the period 1937 to 1939 and below 100,000 metric tons after 1939. In 1944 the quantity was too small to record. Due to the scarcity of supply and the need for

TABLE 2. PEANUT AND SOYBEAN PRODUCTION IN TAIWAN.

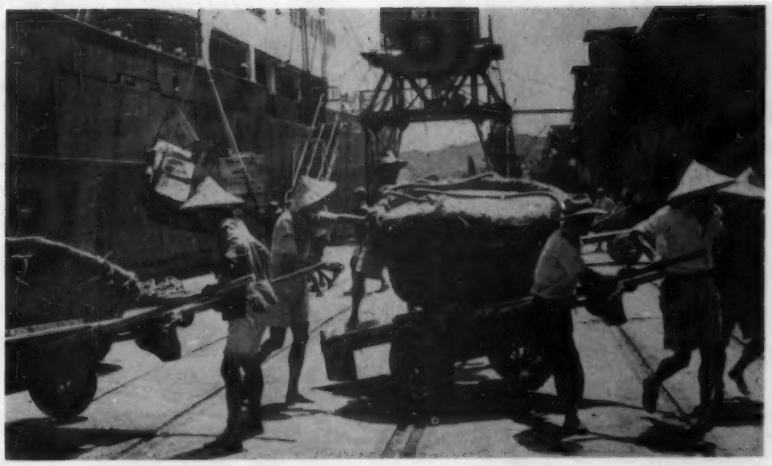
	Peanut		Soybean	
Crop Year	Acreage (ha)	Production (m/t)	Acreage (ha)	Production (m/t)
1900	11,598	6,103	NDA	NDA
1905	19,199	10,926	NDA	NDA
1910	19,166	9,645	NDA	NDA
1915	20,447	12,083	17,941	10,239
1920	22,835	14,792	13,500	6,436
1925	25,296	21,618	10,210	5,753
1930	26,712	23,497	8,602	4,853
1935	30,520	29,339	7,231	3,854
1940	30,617	28,671	4,257	2,684
1945	24,626	11,565	7,405	1,956
1946	50,797	37,379	8,454	4,113
1947	65,106	46,572	7,818	9,894
1948	73,387	53,348	20,362	12,440
1949	77,059	53,284	20,284	12,052
1950	83,387	57,110	20,300	12,543
1951	84,889	61,158	23,251	13,412
1952	80,975	60,037	24,315	14,627
1953	82,580	60,104	28,225	17,426
1954	94,025	65,868	30,048	20,310
1955	96,034	66,572	34,510	24,151

Source of data: Taiwan Food Statistics Book, 1955.

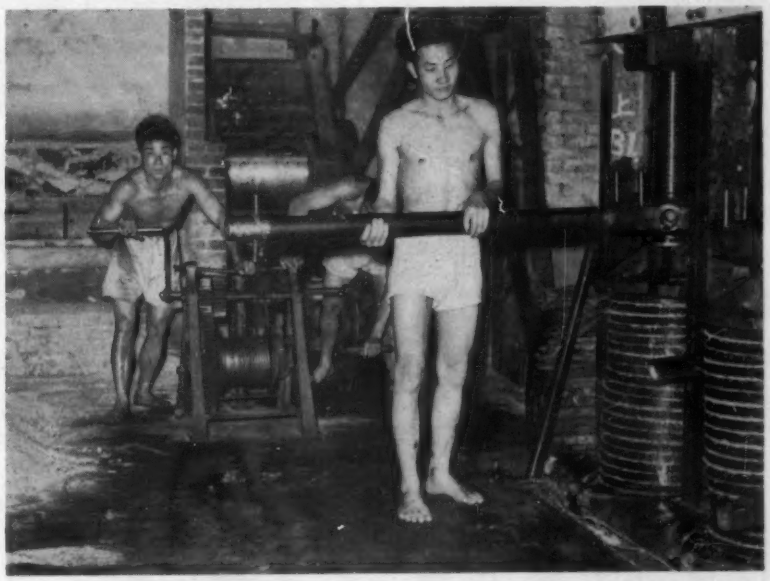
TABLE 3. USE OF BEANCAKE AS FERTILIZER.

	Total commercial fertilizer	Soybean cake	
Year	(m/t)	Quantity (m/t)	Percent of total
1922	122,618	54,903	44.8
1923	141,476	57,165	40.3
1924	176,216	70,435	40.0
1925	203,337	90,837	44.7
1926	213,327	102,508	48.2
1927	231,436	105,311	45.6
1928	373,145	166,326	44.5
1929	356,009	180,841	50.7
1930	397,242	191,420	48.2
1931	387,331	195,573	50.6
1932	405,447	200,136	48.8
1933	431,449	202,974	46.8
1934	528,874	228,161	43.2
1935	534,924	216,552	40.4
1936	604,207	206,919	34.4
1937	622,109	168,219	27.0
1938	648,890	177,995	27.5
1939	585,149	172,573	29.5
1940	495,184	77,379	15.6
1941	449,567	61,567	13.7
1942	378,072	68,769	18.2
1943	325,702	35,520	10.9
1944	154,459	....	....

Source: "Taiwain Fertilizer Handbook," April 1951, Taiwan Fertilizer Co.



UNLOADING bulk soybeans in Keelung, seaport near capital of Tapei. About 100,000 tons a year come into this port and to Kaohsiung at south end of Taiwan.



ONE TYPE of press used to extract soybean oil in Taiwan.

BEANCAKES being hauled from local rail terminal to a farmers' association for sale as hog feed.

available stocks to meet food and feed needs, the use of beancake as well as other oilseed cakes as a fertilizer in Taiwan has been negligible since that time.

Table 3 also shows that soybean cake represented about one-half of the total fertilizers used from 1929 to 1932. For the period 1922 (the first year official data are available) through 1935 it accounted for more than 40%.

Disposition

In recent years large quantities of soybeans have been imported to Taiwan, mostly from the United States through U. S. aid financing under the International Cooperation Administration program. In 1955, the value was approximately $10 million, ranking fourth after cotton, fertilizer, and wheat. The 1955 quantity was more than double the 1935-39 average import.

It is estimated that about 80% of the total imports is processed into oil for human consumption and beancake for animal feed; 15% is used for manufacturing soya products, especially curd, sauce and milk; and about 5% is consumed directly as whole beans or as sprouts.

In contrast, after deduction of about 10% of locally produced beans for seed and waste, an estimated 10% of the balance is processed into oil and cakes, 80% is used for various soya products, and 10% is consumed directly. Also, about one-half of the locally produced peanuts are processed into oil for human consumption and cake for animal feed and about one-half is consumed directly as food, after deducting approximately 10% for seed and waste.

TABLE 4. AVAILABILITY OF PULSES, NUTS, AND SEEDS AND VEGETABLE OIL IN TAIWAN

	Pulses, nuts and seeds								Vegetable oil	
Period or year	Kg/person per year[1]	% of total food	% of total protein	% of total calcium	% of total phosphorus	% of total iron	% of total vitamin B[1]	% of total vitamin B[2]	Kg/person per year[2]	% of total oil & fats
1935-39 avg.	9.70	2.7	8.4	10.2	7.2	9.0	10.3	5.7	1.20	40.7
1940-44 avg.	3.04	0.9	3.6	4.4	2.8	3.3	4.7	neg	0.37	27.8
1945	1.68	0.8	2.9	3.1	2.1	2.7	3.4	neg	0.22	32.4
1946	5.13	1.7	6.2	6.9	4.6	4.6	8.1	2.8	0.83	54.3
1947	8.22	2.5	7.9	9.3	6.0	6.4	10.7	5.0	0.93	52.0
1948	10.07	3.0	9.1	12.0	7.0	8.4	12.4	7.3	1.11	53.9
1949	8.82	2.6	7.7	10.5	5.9	6.8	10.2	4.9	0.99	50.0
1950	11.69	3.3	9.5	13.4	7.6	10.0	11.5	6.7	1.46	56.4
1951	12.83	3.7	10.0	14.9	8.3	10.8	12.2	6.5	1.91	57.2
1952	16.90	4.9	12.6	19.6	10.7	14.5	15.2	8.5	1.79	51.7
1953	16.68	4.6	11.1	18.4	9.4	13.3	13.6	9.8	1.68	49.0
1954	16.88	4.7	11.6	18.4	9.8	13.5	13.9	10.0	1.66	49.1

[1] Pork availability in 1954 was about 16 kg/person/year. [2] Lard availability in 1954 was about the same as that of vegetable oils. Source of data: Taiwan Food Balances, 1935-1954.

Processing Industry

Presently there are 24 privately owned mills authorized to process imported beans into oil and cakes. Their total rated capacity is about 26,400 metric tons monthly on a 24-hour basis. The largest mill has a capacity of about 3,500 metric tons per month and is the only large-scale mill established before the war. The smallest mill has a capacity of about 245 metric tons per month. The following shows the size of these various mills:

Monthly rated capacity	Number of mills
Over 3,000 m/t	2
2,000-3,000 m/t	1
1,000-2,000 m/t	6
500-1,000 m/t	9
Less than 500 m/t	6
Total	24

These 24 mills are scattered all over the island. All have hydraulic presses. Some of them also have manually operated screw presses with a total capacity of around 4,000 metric tons per month, but this capacity is not recognized for allocation of beans because of its inefficiency. The mills are required to produce 13% crude oil (11.7% refined) and 86% cake. A loss of 1% in processing is allowed.

In addition to these 24 mills there are numerous smaller-scale, privately owned, home-industry type mills. They process peanuts primarily and have a total capacity of 4,000 to 5,000 metric tons per month. The exact number and capacity are unknown.

There is one government-owned and operated solvent extraction plant designed to process rice bran with an estimated capacity of 50 m/t per day. This mill was established in south Taiwan about 3 years ago and can also process soybeans, although to date no allocation of imported soybeans has been made. In addition, a second government-owned and operated plant of 60 metric tons daily capacity using Anderson expellers is designed to process peanuts. This mill was established in central Taiwan about 7 years ago. Three small-scale privately owned and operated solvent extraction plants for rice bran and peanuts have a rated capacity of approximately 350 metric tons of rice bran per month. These mills have been established in recent years.

Suez Shipments

NORTHBOUND shipments of soybeans through the Suez Canal totaled 14.2 million bushels for the first 6 months of this year as compared with 12 million during the same period in 1955, reports Foreign Crops and Markets, U. S. Department of Agriculture.

June shipments at 2.2 million bushels were almost 40% higher than during the same month last year, and reportedly were entirely from China-Manchuria.

The total northbound movement of oil-bearing materials through the Suez Canal was up nearly a third over the first half of 1955. Vegetable oil shipments were up about 5%.

The Fats and Oils Outlook

1956-57 CROP YEAR

Markets are expected to absorb all available U. S. fats and oils at support level prices— but all meal may not be absorbed at such levels

J. E. Thigpen

By J. E. THIGPEN

Director, Oils and Peanut Division, Commodity Stabilization Service, USDA, before fall meeting of Institute of Shortening and Edible Oils, Inc., in New York City

BEFORE the war, U. S. production of fats and oils consisted mainly of cottonseed oil and lard. These oils and fats were "byproducts" and moved into the market at world prices. The soybean crop has changed this picture entirely and is grown for its value as a direct source of oil and protein meal. In the 5 years, 1935-39, soybean oil represented 6% of the U. S. production of fats and oils. This year it is about 44%. The volume has grown from 304 million to 4,752 million pounds. At this point I again note the fact that these figures are based on the entire 1956 soybean crop, excluding only beans required for seed.

The picture is even more striking for protein meal. For the 1935-39 period, soybean meal was about 26% of the U. S. production as contrasted with about 75% for this year. The volume has grown from 1 to 10 million tons.

During and for a number of years after the war, the U. S. government encouraged the production of oilseeds to supplement the supply of fats and oils and of protein meal. Price supports have been used for both cottonseed and soybeans since 1941, except for the 3 years, 1946 to 1948, when cottonseed prices were not supported. The price supports probably helped to stimulate production. With increased U. S. production and recovery of production in other areas of the world, however, price supports in 1951 began to cause an accumulation of oil in CCC inventory.

One of the interesting aspects of the price support operation has been the consistent view of soybean grower representatives that they preferred price supports for soybeans at low enough levels to encourage movement of increasing production into U. S. and world markets. They have opposed high price supports which might retard this movement and tend to cause a shrinkage or contraction of the market for U. S. soybeans or accumulation of a surplus in CCC inventory.

The U. S. supply of "edible" fats and oils for the year beginning this Oct. 1, including production of 10.9 billion, amounts to approximately 11.7 billion pounds, compared with approximately 11.4 billion pounds a year earlier. Assuming an increase in domestic consumption proportionate with the increase in population, the supply available for export from the United States for the year ahead is approximately equal to that for the past year.

Current production and supply prospects outside the United States are somewhat better than a year ago. But world economic conditions generally continue good, population continues to increase, and there is need for increased per capita consumption in many countries. Whether these factors, coupled with vigorous efforts to stimulate oil exports under Public Law 480, will provide the basis for absorption of oil available for export above domestic requirements in the year ahead remains to be seen.

To the extent that the entire crop is not exported or crushed in the United States, the available supply of oil and meal will be reduced accordingly.

The U. S. supply of protein meal for the year ahead is currently estimated at 13.6 million tons compared with 12 million tons for the past year. Assuming a 5% increase in the rate of usage per animal unit over last year, the residual available for export in the form of soybeans or flaxseed and of meal as such will amount to about 3.7 million tons compared with about 2.2 million tons for the past year.

Improved production and supply prospects outside the United States may provide greater competition in world markets, especially for protein meal as such. It remains to be seen whether the U. S. and foreign markets will absorb during the year ahead supplies of protein meal available from the 1956 crop.

In summary, world supply-demand on fats and oils appears to be about as closely in balance as can be expected at any given time. There seems to be no surplus although the supply may permit increasing of inventories slightly. Thus, it seems that the market should absorb fats and oils available from the United States at prices not less than those reflected in the 1956 crop price support levels.

With the large increase in the U. S. soybean crop and the consequent increase in protein meal, there seems to be question as to whether the market will absorb all of the meal which could be produced at prices which might be considered as the meal fraction of the price support for soybeans. If this comes about and meal fails to move into the market as fast as it can be produced, the rate of crushing may be reduced somewhat below the potential maximum and this may tend to reduce the available supply of oil at times below what the market might take.

TABLE 1—UNITED STATES EDIBLE FATS AND OILS PRODUCTION[1]

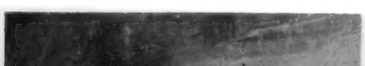
Year beginning Oct. 1	Soybean oil Quantity mil. lbs.	Soybean oil Percent %	Other edible Quantity mil. lbs.	Other edible Percent %	Total mil. lbs.
1935-39 Ave...	304	6	5,204	94	5,508
1946-50 Ave...	1,991	25	6,004	75	7,995
1951	2,614	29	6,276	71	8,890
1952	2,880	32	6,153	68	9,033
1953	2,786	30	6,370	70	9,156
1954	3,376	36	6,126	64	9,502
1955	3,856	37	6,607	63	10,463
1956 Potential[2]	4,752	44	6,128	56	10,880

[1] Including oil equivalent of oilseeds exported.
[2] Assumes the estimated 462 mil. bu. soybean crop all crushed or exported, except for 30 mil. bu. for seed and feed.

TABLE 2—UNITED STATES PROTEIN MEAL PRODUCTION[1]

Year beginning Oct. 1	Soybean meal Quantity 000 tons	Soybean meal Percent %	Other meal Quantity 000 tons	Other meal Percent %	Total 000 tons
1935-39 Ave...	945	26	2,710	74	3,655
1946-50 Ave...	4,884	62	3,015	38	7,899
1951	6,102	65	3,285	35	9,387
1952	6,308	66	3,289	34	9,597
1953	5,991	61	3,903	39	9,894
1954	7,085	68	3,320	32	10,405
1955	8,082	70	3,534	30	11,616
1956 Potential[2]	9,936	75	3,352	25	13,288

[1] Including meal equivalent of oilseeds exported.
[2] Assumes the estimated 462 mil. bu. soybean crop all crushed or exported except for 30 mil. bu. for seed and feed.



How to Figure Your Loss from Combining
(From Massey-Harris Farm Profit)

The Work of the Japanese-American Soybean Institute

Mr. Hayashi will make a regular monthly report on the work of the Institute for Digest readers

By SHIZUKA HAYASHI
Managing Director, Japanese American Soybean Institute, Tokyo

SINCE the establishment of this Institute in May the work of this Institute has been concentrated in research particularly on the arrival condition of U. S. beans and those of other origin.

S. Hayashi

Parallel with research made on the arrival condition of various shipments, studies have been made on the general situation in connection with the shoyu industry and the miso industry in Japan.

The activities of this Institute are being carried out generally in accordance with the initial plan drafted by Mr. Ersel Walley. Most of those provided in the plans have been or are being visualized with the exception of the promotion work which will be carried out from now on.

One of the projects which we have accomplished is the forming and dispatching of a visiting team comprising representatives of the five groups, who are members of this Institute, to the United States. The five representatives have all returned, some via Europe and others back directly from the States.

Definitely they all had a lot to gain by visiting various parts including processing plants, research laboratories, the storing facilities, barge and shipping facilities in New Orleans, Mobile, and also soybean fields.

Japanese Soybeans

Due to the poor Japanese soybean crop estimated this season the total supply of domestic soybeans, which will be available for the different industries such as miso, shoyu, tofu, glue, and feeding, etc., is estimated at around 170,000 tons instead of the earlier figure of 220,000 tons. Out of the total annual requirements of 954,130 tons by the various industries the quantity to be imported, therefore, is set at 784,130 tons. The short supply of 50,000 tons of domestic beans is to be covered by imported beans.

Import Budget

The import budget for the second half of the 1956 fiscal year October 1956 to March 1957 has been decided as 435,000 tons which includes 10,000 tons of Brazilian soybeans to be imported under the automatic approval system. The breakdown of this figure to be divided between the different users including oil mills and other food manufacturers is now under consideration, and will probably be decided by the end of this month.

New crop U. S. soybeans so far purchased by Japan are estimated as follows:

60,000 tons .....October shipment
110,000 tons .....November shipment
30,000 tons .....December shipment
Total 200,000 tons.

The average price is around $112, $113 C&F Japanese ports.

Chinese Soybeans

The total quantity of Chinese soybeans as applied by the different importers for import under the April-September budget is about 86,500 metric tons, the early estimate being 100,000 tons.

In the absence of offers from the Chinese government agency, so far there have been no purchase contracts concluded for new crop Chinese soybeans. It is reported that as soon as the announcement for the import allocation covering the second half of the fiscal year is made by the Japanese government, the Chinese government agency will commence making offers. Importers are expecting a price of £36 FOB, but some sources consider that the Chinese government agency may not offer at prices below those asked for U. S. beans. A telegram reportedly received by a certain importer from the Chinese government agency, Peiping, quotes:

"On account of serious flood damage in North China, the soybean production program is now under reconsideration. . . . However, every effort will be made to secure a quantity for export to Japan."

Brazilian Soybeans

According to the report I received from Rio de Janeiro dated Oct. 5, Brazilian soybeans are out of competition at the moment. It says that due to continuous inflation within Brazil coupled with the government's fixing of very high minimum export prices, prospects for export are poor. It is expected, however, that a quantity between 40,000 tons to 60,000 tons will be available for export during the next 6 months. This, however, depends upon the export price Brazilian government decides in the future. A recent offer indicates a price of $115 FOB. Rio Grande do Sul, packed in bags of 60 kg net. The basis of quality is F.A.Q. 1956 crop maximum 13% moisture, maximum 1% foreign material.

The Japanese American Soybean Institute is the operating agency for the marketing development project in Japan that is being conducted by the American Soybean Association and utilizing P. L. 480 funds.

CROP REPORT

FREIGHT-LINER. First, plastic material is sprayed on surface surrounding hole in car lining, then patch is placed over hole and final plastic coating is sprayed on, as shown in picture.

Offers High-Speed Repair for Boxcars

THE NATION'S billion dollar soybean crop is helping to ease the acute shortage of freight cars usually plaguing the Midwest this time of the year.

While such skyrocketing soybean production should add to the existing strain on the nation's railroads, chemical researchers at Archer-Daniels-Midland have found in the soybean oil molecule a possible solution to the "boxcar dilemma."

Their discovery paved the way for the ADM Freight-Liner System for repairing, relining, and upgrading freight cars. The system already has been adopted by many of America's leading railroads.

With this remarkable new system, a repair job that used to remove a car from service for 3, 4, or more days, can now be completed in just 3 or 4 hours by two men equipped with shears and a brush or spray gun.

First announced early in 1955, the ADM Freight-Liner System was developed around two quick-drying liquid plastics manufactured by Archer-Daniels-Midland Co., Minneapolis, and specially woven glass cloth.

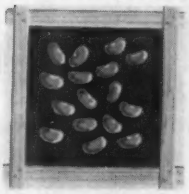
To make interior repairs with the Freight-Liner System, workmen simply brush or spray the wood or metal surface with a plastic compound, Freight-Liner 810. While still wet, the damaged area is covered with a piece of glass cloth cut to size. Finally, a finish coat of the liquid plastic is applied. The resulting patch has a tensile strength of over 11,000 pounds per square inch and is smooth, insect-proof, vermin-proof, leak proof, and impervious to oils. If still greater strength is desired, additional layers of glass cloth can be laminated onto the first.

For completely relining cars, a related system using a heavier woven glass cloth and a special polyester plastic is available.

"Because this system not only promises to relieve the distressing boxcar shortage, but also provides a large new market for a major Mid-west crop, it is indeed gratifying to announce this further addition," James W. Moore, ADM vice president and director of marketing, said.

How to Figure Your Loss from Combining

(From Massey-Harris Farm Profit)



LOSS: $8 PER ACRE

Ave. No. of beans	Loss in bu./acre
2	½
4	1
8	2
16	4
24	6
32	8
40	10

Make lath frame foot square. Count beans found within in 10 areas. Use table at left to compute loss.

Average loss of 4 bushels per acre is due to improper combining speeds, worn parts, poor adjustments on cutterbar, cylinder and air flow.

The Cover Picture

A carload of soybeans is being unloaded by an automatic boxcar unloader at one of America's larger processing plants. The car is picked up, upended and tilted on its side to roll all the beans into a pit from which they are carried by moving belt to the top of the elevator.

Photo is courtesy Archer-Daniels-Midland Co.

Central Soya Repeats Outside Bean Storage

WITH AN ANTICIPATED 28% increase in national soybean production over last year, and as a result of large-scale experiments carried out last year, Central Soya Co. will again revert to outside storage of beans at its Gibson City (Ill.) and Decatur (Ind.) plants.

In commenting on the emergency storage operation, Central Soya's president, Dale W. McMillen, Jr., stated, "This year, as last, our present storage facilities are inadequate to permit continuation of soybean purchases throughout the season, and in order to provide soybean growers with an all season market we must again repeat the temporary storage operation conducted last year. At present, it looks as though we will have to expand last year's capacities to meet this year's production increase.

"We will again store beans on a black-topped area between double rows of silos. Connecting walls will again be erected between and across existing silo rows, and temporary covering for the piled beans will be provided.

"Last year's experiment proved that careful selection and conditioning will protect the beans against open storage conditions, although the operation is no simple task. The company will maintain these facilities until the harvest peak has been reached and bean supplies are back to normal."

Report New Soybean Disease in Illinois

WHAT SEEMS to be a new soybean disease was reported in several areas in south central and southern Illinois this past summer, according to the University of Illinois.

The disease was reported in Morgan, Greene, Madison, Clinton, Jasper, and Crawford Counties. The disease has been observed as far north as U. S. Route 36, and reports indicate that it is scattered over the southern half of the state.

Early symptoms of the disease were difficult to observe, as cool weather may affect many plants in the same way. The plants appeared to be growing slowly, and some stunting was noted. Leaf symptoms were similar to those caused by mosaic or 2,4-D damage.

The affected plants held their leaves longer than the healthy ones or the beans failed to mature, and green spots appeared in the infected fields at harvest time. On closer inspection, these green beans showed evidence of stunting and "dudding" (failure to produce seed pods). Some plants did have a few pods, but many of them contained only one bean. As a result, yield was drastically reduced.

The late symptoms of this disease resemble the late symptoms of bud blight except that the pods, if any, usually remain and do not drop off.

In some areas a few fields were infected so extensively that the beans were not worth harvesting and were a total loss. Some fields were only partly damaged.

Researchers at the USDA Regional Soybean Laboratory at Urbana, Ill., are planning to make extensive tests in the infected areas next year and try to isolate the disease.

Since the disease has not been definitely diagnosed, no treatment has been found to control it. But producers are cautioned against planting beans in infected fields or saving seed from infected fields. They are urged to buy next year's seed from disease-free sources, as the disease may be transmitted by seed.

soybeans are being held off the market in record proportion. Would estimate that 5 million of the 55-million-

SOYBEANS FOR BEANS
October 1956 report, crop reporting board, AMS, USDA

CROP REPORT

Crop 100 Million Above 1955

THE U. S. SOYBEAN crop is now estimated by the Department of Agriculture at 470 million bushels, 100 million bushels more than last year's crop and up 1.8% from the Sept. 1 forecast.

The indicated yield of 22.4 bushels per acre is also a record, exceeding the 1949 yield by 0.1 bushel.

Harvest was virtually complete in most Northern States by Nov. 1, and harvest of the later maturing varieties had begun in many Southern areas.

Yields were generally high except in the dry areas of Arkansas, Oklahoma, Missouri, Kansas, Nebraska, southern South Dakota and South Carolina where yields are below average. The Iowa yield was also down in spots. Quality of the crop was good in the main except for drouth areas. Weed infestations and volunteer corn caused local problems, and there was trouble with shattering during combining in some sections.

Reports from Soybean Digest crop reporters and other sources:

Arkansas. Jake Hartz, Jr., Jacob Hartz Seed Co., Stuttgart: Crop awful slow to start moving. Acreage this area much above last year, but have ample storage to take care of the crop. Yield in irrigated sections equal or better to 1955; other sections 15% less. Generally good size of beans, a little smaller than last year.

Illinois. John H. Butterfield, Pana: Late beans hurt some by last 40 days of no rain. All the beans harvested last 3 weeks cracked badly. 60% of crop being sold outright.

Russell S. Davis, Clayton (10-16): Both early and late beans were harvested without interruption. Crop as a whole excellent quality, low in moisture, weeds and other foreign material. A rainless September cut the yield considerably. 45% of elevator receipts being sold outright. So far very few have applied for government loan. Growers not in urgent need of money and hope price will advance to net loan value.

Robert W. Weitzer, Cypress Land Farms Co., Carrollton (10-22): Dry weather late and wet weather early cut yields. Weeds and grass cut yields and made harvest difficult. Per acre yields 3 to 4 bushels less in 1956. Adams badly lodged. Low quality due to low moisture — too many splits. More beans being stored than ever before in this area.

Indiana. K. E. Beeson, Indiana Crop Improvement Association, Lafayette, Ind.: Quite generally the farmers in the latitude of Lafayette reported beans were not quite as good as they had expected. Southwestern Indiana, in the river bottoms particularly and slightly higher ground, has the finest crop I have ever seen there. A county agent reported yields of 40 to 45 bushels were rather common among the good farmers on the Ohio River bottoms. Quality is generally reported good, although I had a few complaints on light test weight. Quite generally it seemed that farmers were storing. Bud blight is showing in almost any part of the state. The disease will have some slight effect on yield and in a few cases several acres within a field have been rather severely damaged.

Kansas. Weekly Weather and Crop Report (10-23): Soybean harvest is almost complete and yields have been quite variable, ranging from poor to very good.

Kentucky. David Frymire, Ohio Valley Soybean Co-op, Henderson (10-16): Very heavy morning glory and pig weeds in some areas. Total yield up 20-25% from 1955. Many excellent quality beans. Oil yield will be highest ever, we feel. Very minor drouth damage (shriveling). 30% of crop being sold outright. To date, many inquiries but only 9.5% of receipts put into loan from our elevators.

Minnesota. D. W. Moebius, General Mills, Inc., Minneapolis (10-16): Oil content considerably lower than 1955 crop. Protein also lower. Have received a number of No. 4 yellow and sample grade cars. Minnesota

Some Comments on the Crop

J. E. Johnson, Champaign, Ill.: There continues to be that too-large percentage of growers who will not follow the rules of the game. They suffer heavily in yield loss and increased cost of production. They become a menace to the industry by delivering weed seed that takes the discount, never heavy as it should be—a weed situation that can cause a discount for a full carload of beans to the local elevator.

In our humble opinion this is not fair to the grain trade, neither is it fair to the growers who deliver quality beans without weed seed.

Make the discounts so heavy it will be a cure.

PUBLICATIONS

soybeans are being held off the market in record proportion. Would estimate that 5 million of the 55-million-bushel crop moved to market by Oct. 15. Believe holding movement will exert pressure on market for balance of year.

Minnesota. Howard E. Grow, Farmer Seed & Nursery Co., Faribault (10-22): 99% of crop harvested. 10% to 15% increase in total yield over 1955. Quality good, few splits. 10% to 15% of crop sold outright. 75% to 90% will go under government's support program unless market is above loan value.

Henry Leitschuh, Sleepy Eye (10-23): Yield about same as 1955. Quality best ever. 10% of crop was sold outright. About 70% will go under support program. Could use a little more storage because of CCC corn.

Mississippi. W. T. McKinney, Anguilla (10-15): All early beans have been harvested. Weather permitting, bulk of all beans in area will be harvested by Nov. 1. Total yields 30% more than 1955. No criticism from buyers on quality. As long as price no lower than $2, most beans will be sold outright.

D. Gray Miley, Panther Burn Co., Panther Burn (10-22): 20% of crop harvested; outlook for completion Nov. 30. Per acre yield 10 bushels over 1955. Total yield about same. Quality good. Slight damage from drouth. If price stays above $2 most farmers will sell.

Missouri. Maurice Maze, MFA Grain & Feed Division, Mexico, Mo. (10-15): Total yield increase of 30% above 1955 due to severe drouth we had last year. Quality much better than last year. Probably 70% of growers will take advantage of government's support program. Some shortage of boxcars evident in a few locations.

North Carolina. E. S. Mann, Blount, Midyette & Co., Washington, N. C.: Farm storage is not sufficient to take care of the entire crop and there are no public elevators for storage, so a large percentage of the crop will be sold. However, more will go under loan than in prior years.

North Dakota. Floyd Poyzer, Amenia Seed & Grain Co., Amenia (10-22): Crop 100% harvested. Per acre yield 10% below 1955. Beans 2 to 4% green. 70% of crop will go under support program.

South Carolina. Weekly Weather and Crop Bulletin: Soybeans have improved somewhat as a result of plentiful rainfall since Sept. 26 and pods are filling out reasonably well. Heavy insect infestations and continued drouth during most of September seriously threatened the crop.

H. W. Perrow, Cameron, S. C. (10-15): Looking for one-half crop. Will start combining in about 10 days.

SOYBEANS FOR BEANS
October 1956 report, crop reporting board, AMS, USDA

State	Yield per acre: Average 1945-54	1955	Indicated 1956	Production: Average 1945-54	1955	Indicated 1956
	Bushels	Bushels	Bushels	1,000 bushels	1,000 bushels	1,000 bushels
N. Y.	16.0	16.0	17.0	96	80	85
N. J.	19.1	19.0	25.0	386	684	1,000
Pa.	16.9	20.0	23.0	400	440	529
Ohio	20.8	24.5	25.0	20,808	29,228	32,525
Ind.	21.6	21.5	25.0	34,809	43,838	54,300
Ill.	22.6	22.5	28.5	83,096	98,325	135,632
Mich.	19.0	22.0	21.5	1,897	3,036	3,870
Wis.	14.0	12.5	15.5	558	975	1,302
Minn.	17.6	19.5	21.0	18,961	43,934	55,776
Iowa	21.8	19.5	20.5	37,202	43,582	54,140
Mo.	17.6	17.5	22.0	20,616	33,950	45,100
N. Dak.	12.2	15.0	13.5	273	1,200	1,796
S. Dak.	15.0	11.5	13.0	971	2,794	3,003
Nebr.	21.1	10.5	10.0	1,297	1,890	1,850
Kans.	11.7	10.0	10.0	3,859	3,350	3,480
Del.	15.0	20.0	23.0	914	2,100	3,105
Md.	16.3	20.0	23.0	1,235	3,100	4,853
Va.	16.6	20.0	22.0	2,250	4,020	5,214
N. C.	15.2	15.5	21.0	4,049	5,068	8,316
S. C.	10.4	14.5	12.5	710	2,740	2,950
Ga.	9.8	12.0	12.5	242	684	812
Fla.	[1]17.8	22.0	20.0	[1] 206	792	860
Ky.	17.0	18.0	20.5	1,906	2,412	2,665
Tenn.	17.5	18.0	18.0	2,737	4,500	4,860
Ala.	17.7	23.0	22.0	1,128	2,162	2,090
Miss.	15.0	19.0	14.0	3,907	11,894	10,514
Ark.	16.8	18.0	19.0	8,226	21,906	26,856
La.	15.4	22.0	18.0	618	1,936	2,142
Okla.	10.1	11.5	6.0	354	460	204
Texas	[1]13.5	13.0	25.0	5	26	225
U.S.	20.0	19.9	22.4	253,653	371,106	470,064

[1] Short-time average.

South Dakota. H. G. Miller & Son, Garden City: Total yields somewhat better than 1955. Some fields of late planting got damaged by Sept. 6 frost. Pretty good quality. I would say 70% of crop is being stored on farms. Nearly all will take advantage of support program.

Ontario. K. A. Standing, Ontario Soya-Bean Growers' Marketing Board, Chatham (10-16): Conditions have been ideal for harvesting. Outlook for completion Nov. 10. Per acre yield down 10% compared with 1955. Green beans are showing up from crops frozen Sept. 13, otherwise quality is good. 20% of crop is being sold outright.

PUBLICATIONS

DISEASES. Stem canker is a serious disease of soybeans in Ontario. Artificial inoculation experiments have indicated:

1—Soybeans which are highly susceptible to infection at midstage in their development become progressively less so as they approach maturity.

2—Reduction in yield is more or less directly proportionate to earliness of infection.

3—All varieties now of commercial importance in Ontario are highly susceptible to the disease.

4—Six common weeds, velvet leaf, lamb's quarters, redroot pigweed, common purslane, common ragweed, and lady's thumb, also tomato, pepper, and snap and field bean, are not susceptible to infection by the soybean disease.

The disease is definitely seedborne, but infection from the soil seems to be of more importance, according to Dr. A. A. Hildebrand, senior plant pathologist at Harrow, Ontario.

Pod and stem blight is of negligible importance in Ontario. The disease shows little evidence of being able to infect plants until late in the growing season. In the absence of resistant varieties no better methods of control can be recommended than those of completely plowing under soybean debris, of avoiding the planting of the more susceptible varieties, and of practicing crop rotation.

OBSERVATIONS ON STEM CANKER AND POD AND STEM BLIGHT OF SOYBEANS IN ONTARIO. By A. A. Hildebrand, Science Service Laboratory, Harrow, Ontario. Canadian Journal of Botany, 34: 577-599. 1956.

NEMATODE. The soybean cyst nematode, which can cause damage to soybean fields ranging from no measurable amount to complete destruction, has been found on an area of about 1,400 acres in southeastern North Carolina.

Surveys taken since its discovery 2 years ago and warnings sent to soybean producing states have failed to reveal its presence in any other area.

Research programs begun in 1955 by the North Carolina Agricultural Experiment Station and the U. S. Department of Agriculture are continuing. These efforts are directed toward finding vulnerable points in its life history, seeking out soil fumigants, crop rotations, and resistant strains of soybeans that will assist in control or eradication of the pest.

The soybean cyst nematode has a limited number of hosts. However, these hosts, which include annual lespedeza, common vetch, and snap beans, occupy extensive acreages in many states.

SOYBEAN CYST NEMATODE. ARS Special Report 22-29. Agricultural Research Service, U. S. Department of Agriculture, Washington 25, D. C.

THE USE OF ISOLATED SOYBEAN PROTEIN IN PAPER COATINGS. By H. R. Hall. Tappi. Vol. 38, No. 4, April 1955, pages 249-252.

SEVERE ROOT-KNOT NEMATODE INFECTION OF THE SOYBEAN VARIETY LEE. By Marvin D. Whitehead, Arnold Matson, and Leonard Williams. Plant Disease Reporter, Vol. 40, No. 3, Mar. 15, 1956, page 176.

LIFE HISTORY OF THE SOYBEAN CYST NEMATODE. By C. B. Skotland. Phytopathology, Vol. 46. January 1956, page 27.

ERADICANT TREATMENTS FOR NARCISSUS BULBS AND GLADIOLUS CORMS HARBORING SOYBEAN NEMATODE CYSTS. By N. N. Winstead and C. B. Skotland. Phytopathology, Vol. 46, January 1956, page 31.

LETTERS

He Sold at $2.09

TO THE EDITOR:

At planting time I could have sold above the support price, but my yield and sometimes my stand is not always good and I didn't know what amount to sell, so I did not sell any.

In mid-July, I could have sold at the support level, but my Lee beans were about waist high, not a bloom in sight, and I would have cut them for hay, if I had needed hay. I was afraid to contract to sell a single bean.

The first week of August we had several good rains, and my Lee beans broke out in blooms, and soon began to develop pods, lots of them. At this time I sold my beans for $2.09 per bushel, feeling that I would be safe in anticipating a 25-bushel-per-acre yield.

The price is below the loan, but I do not feel the difference will be more than the cost of moving beans in and out of storage and losing beans from drying, rat damage, splitting, leaking roof, etc.

Noticing the way beans respond to water, I would like to read more about it, and about irrigating, in the Soybean Digest.

I feel that I am on the right track when I know that I am following practices recommended in the Digest. —*Robert Lee Beadel, Benoit, Miss.*

BOOKS

Contrasts Soybeans, Cotton

PRICE SUPPORTS. Secretary of Agriculture Ezra Taft Benson contrasts soybeans with the tobacco and cotton crops in their relationship to government in his recent book, Farmers at the Cross Roads.

While tobacco and cotton have been losing their markets largely as a result of rigid high price supports, soybeans have been building markets. Benson says that last year over 60% of 317,000 burley tobacco farms in the United States had the minimum allotment of 5/10ths acre, "rationed poverty."

And in 25 years U. S. cotton acreage has been cut back from 43 to 17.4 million acres, while foreign cotton production has doubled, and our cotton exports have shrunk from 7 to 2 million bales.

But in the same 25 years soybean acreage has increased from 1 million to 19 million. While cotton was losing an export market soybeans were developing one.

"While cotton reduced its acreage through fear of abundance, soybeans willingly expanded, even on the very acres taken out of cotton.

"We have price support programs for soybeans. Except during the war, they have been flexible and discretionary, not high, rigid and mandatory. They served to strengthen and stabilize markets without piling up burdensome surpluses."

Benson, of course, recognizes that many other things beside government programs contributed to the decline of cotton and tobacco and the expansion of soybeans.

He says: "The guarding and improving of levels of living on American farms requires a program of storage and price supports to help to assure stability of income." But, "Price supports which tend to prevent production shifts towards a balanced supply in terms of demand and which encourage uneconomic production and result in continuing heavy surpluses and subsidies should be avoided."

FARMERS AT THE CROSS ROADS. By Ezra Taft Benson. 108 pages clothbound. $2.50. Order through Soybean Digest, Hudson, Iowa.

Ezra Taft Benson

SOYS AS FOOD. In his new book, Soybeans for Health, Longevity, and Economy, Dr. Philip S. Chen reminds us again that the soybean is a food without peer, both from the standpoint of nutrition and economy.

He states that the soybean is as nearly a perfect food as cow's milk, and at the same time it is rich in iron and vitamin C in which milk is deficient.

The soybean has not attained the prominent place in human nutrition in America it deserves, according to Dr. Chen. It received some attention during the war when there was a shortage of staples, but after the war, consumption dropped, "a situation that is neither good for the nation nor the individual. It is the purpose of the present volume to show that the more liberal use of soybeans in the human diet will insure the individual user health, longevity, and economy—the three prime objectives of every homemaker."

Dr. Chen is head of the chemistry department and head of the division of natural sciences at Atlantic Union College. A native of China, he is now a naturalized United States citizen. His scientific writings have appeared in many journals. His "Soybeans and Heart Disease" appeared in the June Soybean Digest.

SOYBEANS FOR HEALTH, LONGEVITY, AND ECONOMY. By Philip S. Chen, Ph.D. The Chemical Elements, publishers. 242 pages, indexed. Price $3. Order through Soybean Digest, Hudson, Iowa.

YEAR BOOK. National Soybean Processors Association has issued its Year Book for the 1956-57 Association year, President R. G. Houghtlin announces.

The Year Book as in the past contains the constitution and bylaws of the Association, code of ethics, officers, directors, list of standing committees, names of Association members, trading rules and other information.

YEAR BOOK 1956-57 NATIONAL SOYBEAN PROCESSORS ASSOCIATION. $1 per copy. 3818 Board of Trade Bldg., Chicago 4, Ill.

Cargill, Inc., has announced the

Sales Engineer

Donald B. Lee, well-known oil mill superintendent, has been appointed a sales engineer for the **V. D. Anderson, Co.,** manufacturer and supplier of "Expellers," solvent extraction units and related equipment.

Donald B. Lee

Mr. Lee has been associated with the Haynes Milling Co., Portland, Ind., where he was superintendent of processing, and has a background of 11 years practical experience in extracting oleaginous materials.

He will also service oil mills and meat packing and rendering plants for Anderson.

Completion of an expansion of feed and grain handling facilities at **Cargill, Inc.,** Nutrena Mills plant at Sioux City, Iowa, has been announced by Miles Patton, plant manager. Included in the expansion are a 50-foot dump scale and seven bulk storage bins.

The **Sharples Corp.,** centrifugal and process engineers, Philadelphia, Pa., announces the opening of a St. Louis office to serve industries in Missouri, Kansas, Arkansas, southern Illinois, southern Indiana and Kentucky from Louisville west. The new office is under the direction of Howard H. Smith, who has been associated with Sharples since 1941.

Warren G. Henderson, Jr., joined the Chicago staff of the **Sharples Corp.** Nov. 1. He has been a sales engineer for Minneapolis-Honeywell in Chicago since 1953.

The new Chattanooga, Tenn., plant production engineer for **Central Soya Co.** is Tom C. Campbell, who for the past 5 years has been associated with Whitney Chain Co., Atlanta, Ga.

The appointment of Joseph P. Gould as farm manager of the new **Pillsbury** research farm at Clinton, Iowa, has been announced. He was formerly a field man for Farmers' Exchange Elevator, Riverton, Wyo.

L. C. Harvey, Philadelphia district manager of **American Mineral Spirits Co.,** passed away following a heart attack recently. "Lou" had been with Amsco since 1939.

Appointment of Gordon L. Alexander and W. B. Saunders as assistant vice presidents of the grain division of **Cargill, Inc.,** has been announced.

The Hammond, Ind., plant of **Stauffer Chemical Co.** has recently added Billy Dean Scallorn, a chemical engineer, to its technical staff. He previously worked at the Fort Worth plant of the consolidated chemicals division of Stauffer.

The promotion of Arthur W. Parry, Jr., from advertising assistant to advertising manager of **McMillen Feed Mills** has been announced. He joined the company in 1954 and has helped develop farm magazine, radio, TV and direct mail advertising campaigns.

Cargill, Inc., has leased the grain elevator facilities of the Hartland Elevator Co., at Hartland, Minn. Cargill now operates 18 country elevators in Minnesota with a total storage capacity of 5 million bushels.

At the recent annual meeting of the American Oil Chemists Society in Chicago, Robert G. Short, A. E. Staley Manufacturing Co. chemist, won a soybean guessing contest sponsored by the **R. J. Brown Co.,** St. Louis. He missed by just two the correct number of beans in a jar.

Albert J. Petersen has been appointed general manager of Super Soo Feed Mills, **Sioux Soya Mills** and Western Feed Mills, with headquarters at Sioux City, Iowa. He has been in the feed and soybean industry for many years.

Bartley A. Greenwell has been appointed Midwest district manager of the **Girdler Co.'s Votator** division, with headquarters at the Board of Trade Bldg., 141 W. Jackson Blvd., Chicago.

Offices of the chemical products division, **Archer - Daniels - Midland Co.,** were moved effective Oct. 1 from Cleveland to the home office of the corporation at 700 Investors Bldg., Minneapolis 2, Minn.

Howard L. Roach, **J. Roach Sons, Inc.,** Plainfield, Iowa, American Soybean Association director, and Mrs. Roach both underwent operations at the Mayo Clinic in Rochester, Minn., in late October. Mrs. Roach was able to leave the Clinic the same week but Howard was expected to be confined for 2 weeks.

A. E. Staley Manufacturing Co., Decatur, Ill., has announced the appointment of the Biddle Co., Bloomington, Ill., to handle its soybean division advertising account.

Charles H. Blackshear, Jr., has been appointed manager of the **Pillsbury** feed plant at Centerville, Iowa. He was transferred from the Pillsbury plant in Louisville.

Cargill, Inc. has announced the purchase of 17 acres of land along the west bank of the Missouri River at Omaha, Nebr., to be developed in the future as additional company river grain elevator facility. Cargill, a pioneer in water transportation of grain on inland waterways, already has a terminal elevator in Omaha with a rated storage capacity of 8½ million bushels.

KANSAS CITY Board of Trade where trading in soybean futures was initiated recently.

Kansas City Begins Futures Trading

TRADING in soybean futures began on the Kansas City Board of Trade recently, following U. S. Department of Agriculture approval of Kansas City as a contract market under the Commodity Exchange Act.

Minimum margin requirements by the Kansas City exchange on hedging and spreading trades are 5¢ per bushel except on trades in the same commodity in the Kansas City market, when the minimum is 1¢ per bushel or the Clearing House requirements, whichever is higher. On all other trades, initial margins are 15¢.

Margins on all commitments, except hedging and spreading trades, are maintained at the following minimum levels: 10¢ per bushel up to 1 million bushels; 15¢ between 1 and 2 million bushels; 20¢ between 2 and 4 million bushels; and 25¢ above 4 million bushels.

All contracts are for No. 2 yellow soybeans. No. 1 soybeans may be tendered on contract at a premium of 3¢ per bushel over the contract price; No. 3 yellow soybeans 14% moisture or less, at a discount of 2¢ under the contract price; and No. 3 yellow soybeans, over 14% moisture, at a discount of 5¢ under the contract price.

DAILY MARKET PRICES **TRENDS AT A GLANCE (Weekly Close)**

LATE REPORTS

STOCKS. Stocks of old crop soybeans in all storage positions on Oct. 1, 1956, totaled 3.7 million bushels, according to reports assembled by the crop reporting board. This compares with nearly 10 million bushels in storage a year ago and 1.3 million bushels on Oct. 1, 1954.

Included in the carryover stocks of soybeans are nearly 2 million bushels on farms and over 1 million bushels at interior mills, elevators and warehouses as estimated by the crop reporting board. Stocks of old soybeans in terminals and processing plants were at a very low level with the combined total amounting to about 660,000 bushels.

Oct. 1, 1956, stocks indicate disappearance of 377 million bushels from an estimated total supply for the 1955-56 season of 381 million bushels—1955 production of 371 million bushels plus nearly 10 million bushels in storage Oct. 1, 1955. Crushings for the crop year Oct. 1, 1955, to Sept. 30, 1956, amounted to 283 million bushels. Exports of around 65 million bushels are reported for the crop year, while seed and feed account for another 29 million.

U. S. stocks of soybeans, Oct. 1, 1956, with comparisons (1,000 bu.)

Position	Reported by	Oct. 1 1954	Oct. 1 1955	July 1 1956	Oct. 1 1956
On farms	Crop Reporting Board	538	3,931	7,131	1,975
Terminals	Grain Division AMS	613	2,628	11,038	369
Commodity Credit Corp. [1]	Commodity Credit Corp.	0	1,416	0	0
Procesing plants	Bureau of Census [2]	81	217	36,651	291
Int. mills elev. & whses [3]	Crop Reporting Board	113	1,757	9,383	1,076
TOTAL		1,345	9,949	64,203	3,711

[1] Owned by CCC, in transit or stored in their own bins. [2] Adjusted to stocks of old soybeans as reported to the crop reporting board. [3] All off-farm storages not otherwise designated.

Stocks of soybeans by states Oct. , 1955 and 1956 (1000 bu.)

State	Off-farm total Oct. 1 1955	Off-farm total Oct. 1 1956	All positions Oct. 1 1955	All positions Oct. 1 1956
Ohio	271	*	692	*
Ind.	103	58	568	277
Ill.	703	284	1,594	776
Minn.	2,042	302	2,463	522
Iowa	454	325	1,582	674
Mo.	173	69	226	171
Nebr.	38	*	200	*
Kans.	2	10	12	27
N. C.	3	12	18	37
Ark.	94	*	149	*
Other	2,135	676	2,445	1,227
U. S.	6,018	1,736	9,949	3,711

* Other states and unallocated to avoid disclosing individual operations.

Cottonseed oil, soybean oil, oilcakes and meal: Preliminary estimates of U. S. exports in September 1956 and October-September 1955-56 and actual exports, September 1955 and October-September 1954-55.

Commodity	Sept. 1955 (Preliminary)	Sept. 1956 (Preliminary)	Oct.-Sept. 1954-55	Oct.-Sept. 1955-56 (Preliminary)
	Million pounds			
Cottonseed oil, refined	10.9	0.8	439.0	251.6
Cottonseed oil, refined and further processed	16.2	6.1	104.3	118.5
Cottonseed oil, crude	23.1	28.6	135.6	239.4
Total cottonseed oil	50.2	35.5	678.9	609.5
Soybean oil, refined	1.0	4.9	23.3	63.4
Soybean oil, refined and further processed	0.7	48.9	13.2	410.2
Soybean oil, crude	0.4	21.4	13.6	87.6
Total soybean oil	2.1	75.2	50.1	561.2
	Thousand short tons			
	September		October-	
Cottonseed cake and meal	24.1	3.1	167.6	152.4
Linseed cake and meal	11.9	15.2	76.2	152.6
Soybean cake and meal	27.9	28.3	271.7	396.9
Total cake and meal	63.9	46.6	515.5	701.9

EXPORTS OIL, MEAL. Exports of soybean and cottonseed oil from the United States during the 12 months ending Sept. 30, 1956, totaled nearly 1.2 billion pounds of oil, compared with the previous record of 729 million pounds in 1954-55, reports Foreign Agricultural Service of the U. S. Department of Agriculture.

During the same period, a total of 702,000 short tons of cottonseed, soybean and linseed cake and meal was exported, as against 515,000 tons during the previous marketing year. (These data are based in part on preliminary Census Bureau returns for cottonseed oil, soybean oil and cakes and meal for September 1956.)

Soybean oil exports of 561 million pounds were more than 11 times the 1954-55 figure. Cottonseed oil exports of 610 million pounds, on the other hand, were down about 10% from the previous marketing year as government stocks were exhausted. Exports of the two oils, plus the oil equivalent of soybeans exported, amounted to almost 1.9 billion pounds.

The largest percentage increase in cake and meal exports took place in linseed cake and meal; 1955-56 shipments were twice the previous year's. Cottonseed cake and meal were down by nearly the same percentage as cottonseed oil. Soybean cake and meal exports increased by 125,000 tons, over 45% above 1954-55.

PROCESSING OPERATIONS. Reported by Bureau of the Census for August and September.

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stocks, September 1956-August 1956 (tons)

Product	Production September 1956	Production August 1956	Shipments and transfers September 1956	Shipments and transfers August 1956	Stocks end of month Sept. 30, 1956	Stocks end of month Aug. 31, 1956
Soybean:						
Cake and meal	459,514	513,028	494,039	549,898	111,263	145,788
Flour	9,211	8,903	9,244	8,790	1,738	1,771
Lecithin	1,207	1,419	(NA)	(NA)	1,362	1,365

(NA)—Not available.

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, September 1956-August 1956 (tons)

State	Net receipts at mills September 1956	Net receipts at mills August 1956	Crushed or used September 1956	Crushed or used August 1956	Stocks at mills Sept. 30, 1956	Stocks at mills Aug. 31, 1956
U. S.	841,261	230,781	596,305	653,796	615,746	370,790
Illinois	402,467	86,528	245,448	244,478	307,052	150,033
Indiana	104,091	21,221	76,345	80,008	64,356	36,610
Iowa	99,241	42,314	87,288	105,935	67,394	55,441
Kansas	19,324	423	4,170	(1)	15,233	79
Kentucky	(1)	3,578	(1)	(1)	(1)	(1)
Minnesota	20,256	35,199	33,762	49,245	6,380	19,886
Missouri	60,435	928	28,070	25,250	52,824	20,459
Nebraska	(1)	(1)	.....	.....	(1)	(1)
North Carolina	(1)	(1)	.....	.....	(1)	288
Ohio	38,571	27,707	66,684	69,081	28,695	56,808
Texas	.....	.....	.....	.....	(1)	(1)
All other	96,876	12,883	54,538	79,790	73,812	31,186

[1] Included in "All other" to avoid disclosure of figures for individual companies.

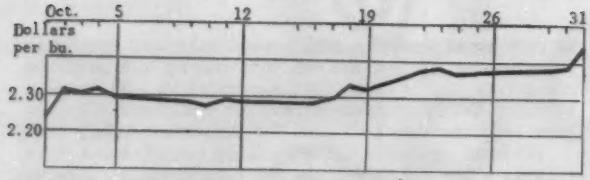
Soybean products: Production and stocks at oil mill locations, by states, September 1956-August 1956

State	Crude oil (thousands of pounds) Production September 1956	Crude oil (thousands of pounds) Production August 1956	Crude oil (thousands of pounds) Stocks at mills Sept. 30, 1956	Crude oil (thousands of pounds) Stocks at mills Aug. 31, 1956	Cake and meal (tons) Production September 1956	Cake and meal (tons) Production August 1956	Cake and meal (tons) Stocks at mills Sept. 30, 1956	Cake and meal (tons) Stocks at mills Aug. 31, 1956
U. S.	221,302	249,027	91,937	87,281	459,514	513,028	111,263	145,788
Illinois	91,796	93,714	35,243	35,609	182,655	182,980	48,352	54,400
Indiana	27,962	31,396	13,615	10,070	59,696	65,167	(1)	40,635
Iowa	33,759	40,710	11,764	11,142	69,314	85,907	13,541	23,301
Kansas	1,307	(1)	1,108	(1)	3,284	(1)	(1)	(1)
Kentucky	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Minnesota	12,626	17,983	8,724	7,894	26,627	38,013	3,456	1,729
Missouri	10,234	9,141	2,236	1,870	22,309	19,962	3,360	3,626
Nebraska	.....	.....	(1)	(1)	.....	.....	(1)	(1)
N. Carolina	.....	.....	(1)	(1)	.....	.....	129	1,854
Ohio	23,799	25,917	6,668	5,335	51,435	56,021	3,351	3,854
All other	19,819	30,166	12,579	15,361	44,194	64,959	39,054	16,387

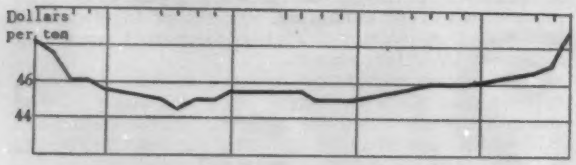
[1] Included in "All other" to avoid disclosure of figures for individual companies.

DAILY MARKET PRICES

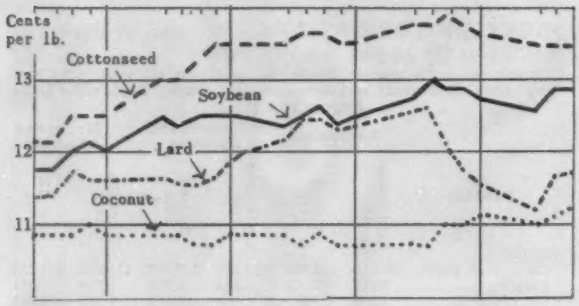
No. 2 Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur

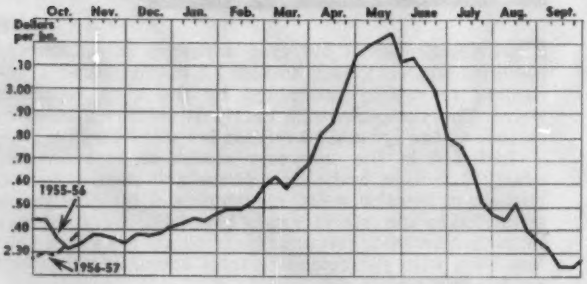


Crude Vegetable Oils and Lard

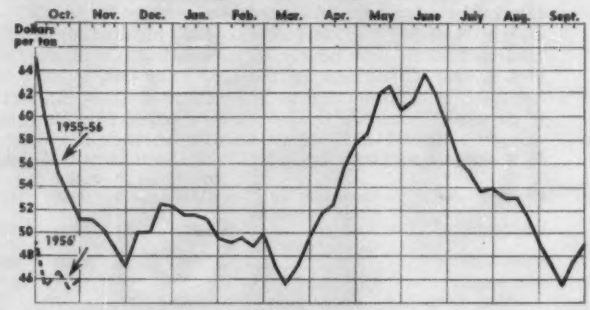


TRENDS AT A GLANCE (Weekly Close)

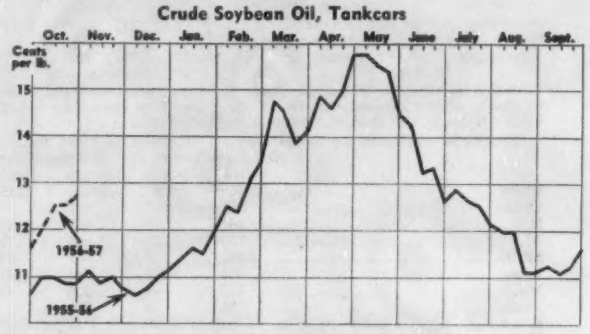
Near Futures Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Soybean Oil, Tankcars



October Markets

WITH the heaviest harvest movement over, October saw stronger soybean and soybean oil markets but a somewhat weaker market for meal—in fact, meal prices equalled the lowest prices of the past 10 years.

Reasons for the strength in beans and oil:

1—Heavy oil exports for the first quarter, expected to set a new record by far, with exports for the year fully equal to last year. Exports of soybeans are also expected to be good, with shipments so far about equal to those for the same period last year.

2—The farmer holding movement, with more soybeans going into storage than ever before.

3—Announcement by the Department of Agriculture that Commodity Credit Corp. will not dump any beans it may take over after next May 31 at less than the market or support price plus carrying charges, whichever is higher.

4—Good processing margins which induced processors to build up inventory. Soybeans were moving to processing plants much more freely than expected in spite of heavy storage by farmers due to the large size of the crop.

5—Political unrest in Poland and Hungary which opened up the question of whether the U. S. government will make fats and oils available to those countries.

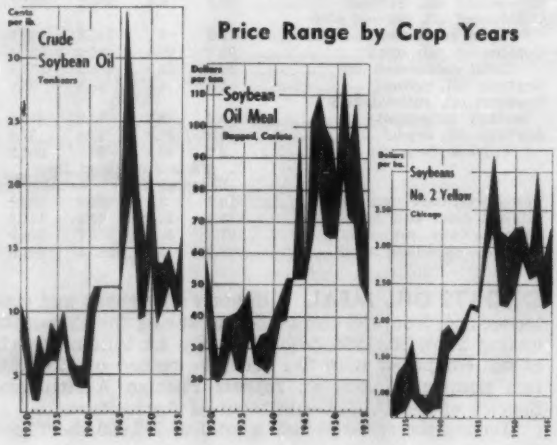
A basically tight situation in fats and oils was expected to prevail in the first quarter, but there were some reports that world supplies of edible oils for the year will run well ahead of last season. A larger olive crop than last year is expected in the Mediterranean countries and a larger peanut crop in India.

Demand for soybean oil meal during October was slow to steady, and offerings were more than ample. There was some reluctance to increase inventories in the face of the big soybean and corn harvests.

A fair to good export trade in meal going to Europe and Japan was reported.

BYPRODUCTS. The price of soybean fatty acids remained at 15¼¢per pound during October. Acid soybean soap stock delivered Midwest advanced from 5¢ to 5⅛¢, but raw soybean soap stock declined from 2¼¢ to 2⅛¢.

Price Range by Crop Years



WASHINGTON DIGEST

Sees 70-Million

"5—Soybean oil meal consumption

duction, marketing and utilization of oilseeds and peanuts.

WASHINGTON DIGEST

USDA Happy Over Price Rise

By WAYNE DARROW
Washington Correspondent for The Soybean Digest

PRICE RISE. USDA points with pride to rising soybean prices during the harvest of the largest crop on record—and takes the credit. Quite understandably, officials are not at all modest this fall.

One official laughingly says: "We planned it that way. Three things have enabled us to hold prices way above what anyone except the bureaucrats thought possible."

The three things cited are:

1—Orderly marketing. Harvesting is practically finished, but there has been little dumping.

2—Early announcement of CCC re-sale policy next June-September on loan beans taken over next May 31.

3—The 480 export program on edible oils. Whether planned or accidental, the October-December export volume is estimated nearly half again as large as in this period a year ago.

Cash prices of beans at Chicago rose 12¢ a bushel the first 3 weeks of October. November futures rose 8¢ and January futures 9¢ a bushel during that time.

Crude soybean oil prices at Decatur rose 1¼¢ a pound in those 3 weeks, and January futures rose 1¢.

After declining 26¢ a bushel from Aug. 15 to Sept. 15, average farm price of beans showed little change during the month ended Oct. 15.

Officials expect some seasonal price decline, but seem confident it will be small. Chiefly they're elated that prices have held their own through most—perhaps all—of the critical political month of October.

OUTLOOK. USDA estimates the soybean crush this season at 325 to 335 million bushels.

Bean exports are estimated at 75 to 80 million bushels. Official talk continues to be very bullish on exports of both beans and oil. European developments increase official optimism.

What will CCC do with the loan beans it takes over next May? Officials aren't worrying about that now. For one thing, they say it depends on how much cotton acreage goes into the 1957 soil bank. They expect quite a cut in cotton acreage without a corresponding increase in Southern bean acreage.

What's done with CCC beans also depends on the size of the 1957 bean crop. They allow it's possible, but don't expect two big bean crops in a row.

EDIBLE OILS. Included in the P. L. 480 agreement with Spain announced in late October, which provides for financing the sale of $49.6 million of U. S. agricultural commodities to that country, were 59,000 metric tons (about 131 million pounds) of cottonseed and/or soybean oil to be shipped by June 1957.

According to our information, Spain's total expressed needs are for 255 million pounds, of which 44 million have already been shipped. That leaves a balance on dollar purchases and ICA program of 80 million pounds.

Spain wants a sizable portion of the 480 program edible oils as quickly as possible. Authorization of $14 million worth of edible vegetable oils for Spain was announced Oct. 25.

Spanish estimated needs have been made with only a preliminary estimate of the olive crop available. Should Spain need more oils from us there is no question she can get them on the 480 program by simply showing need.

The 480 program with Italy is expected soon. Italy's total needs of about 133 million pounds are not as sure as in the case of Spain. No other big 480 deals are close at hand, though a number of small ones are in the making. South America is figured to take a lot of U. S. oils, but this will show up during the last half of the marketing year rather than now.

USDA estimates that Spain imported about 400 million pounds of soybean and cottonseed oil from the United States in the year ending last Sept. 30. Of this about 280 million pounds were through the 480 program, the balance through dollar sales.

Italy imported about 30 million pounds of edible oils in the last marketing year, practically all through the 480 program.

Present indications are that Italy will greatly increase its U. S. edible oil imports the coming year.

USDA says October-December total edible oil and soybean exports will exceed those of that period last year. Officials are inclined to think the entire 1956-57 export volume will be close to the high mark of the past year.

Reopened trade with Yugoslavia involves an early purchase of about 64 million pounds of lard. The total for the marketing year is expected to exceed the 85 million pounds of last year. This is a minor factor in edible oil markets, but one worth noting.

NEW PRODUCTS and SERVICES

Sees 70-Million Bushel Carryover

A CARRYOVER of 70 million bushels of soybeans as of next Sept. 1 into the 1957 crop year was predicted by Fred H. Hafner, director of soybean oil meal sales, General Mills, Inc., Minneapolis, in a market letter Oct. 16.

Mr. Hafner projected the disposal of 1956's 470-million-bushel soybean crop this way:

	Bushels
For Processing (25 million per month)	300,000,000
For Export (6 million per month)	72,000,000
For Seed	28,000,000
Total	400,000,000
Probable carryover September 1957	70,000,000

"We are hoping to see a gradual advance in the price of soybean oil during the next 6 months which would be reflected in a gradual advance in soybean prices," stated Hafner. "Stabilization of meal prices in the range of $45-plus-or-minus-$5 would be good for both our industry and the feed industry.

"A large percentage of the crop will not be marketed this fall but will be withheld from the market in anticipation of more favorable prices. If higher prices are not forthcoming by Jan. 31, a large quantity of soybeans will go under government loan. If this quantity is large enough, a substantial price advance will be necessary to get supplies for processing. However, a price advance to the loan level should bring out soybeans all year in most places."

Hafner offered the following summary for the next 6 months:

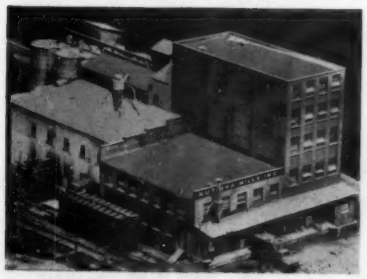
"1—Soybean prices will advance to at least the loan level to farmers in various marketing areas.

"2—Soybean oil prices will advance, offsetting most of the advance in soybean prices.

"3—Soybean oil meal prices will remain at or near current price levels with the trend toward the upside rather than the downside.

"4—Soybeans will be in surplus for the first time in history.

New Nutrena Mill



FEED MILL, where considerable tonnages of soybean oil meal will be used in processing feed formulas, was recently leased by Nutrena Mills, Inc., a subsidiary of Cargill, Inc., at Mt. Ulla, N. C. The Nutrena installation is located in the low-roofed half of the building proper, and includes also 100,000 bushels of storage capacity in tanks at the rear of the building.

"5—Soybean oil meal consumption will hit a new high.

"6—Heavy soybean oil exports under P. L. 480 are anticipated—along with heavy soybean exports."

Shippers Elect

J. P. CRITZ, Clarksdale Grain Elevator, Clarksdale, Miss., was elected president of the Midsouth Soybean and Grain Shippers Association at the annual meeting at Blytheville, Ark., recently.

Other officers elected were: Albert Cravens, Missouri Soybean Corp., Caruthersville, Mo., vice president; and Paul C. Hughes, Farmers Soybean Corp., Blytheville, secretary-treasurer.

J. P. Critz

On the executive committee are John C. Terral, Terral-Norris Seed Co., Lake Providence, La.; Cecil Moss, Tennessee Soybean Co., Union City, Tenn.; H. M. Jordan, Jordan Seed Co., Cleveland, Miss.; Gene Williamson, Browder Milling Co., Fulton, Ky.; Milton Magee, Farmers Soybean & Grain Co., Dyersburg, Tenn.; Harold Lumsden, Essex Grain Co., Essex, Mo.; B. O. Berry, St. Joseph (La.) Grain Elevator Co., and Joe Stallings, Stallings Bros., Morrilton, Ark.

Resolutions adopted included:

That the U. S. Department of Agriculture increase personnel in the Federal Appeal Office in Memphis.

That a move be started to take pieces of soybeans that fall through an 5/64-inch screen out of the foreign material class.

That the association make an organized drive to eliminate the rate differential between 100,000-pound cars and smaller cars where such differential now exists.

That the association would make an effort to have barley, wheat, oats, rye, corn and grain sorghums all on the export list of grains as far as rates are concerned and that they all carry the lower soybean rate for export.

That an effort be made to get on arrival inspections in the ports instead of at the time of unloading.

The association's board engaged on a 90-day trial basis C. C. Dehne, Sr., Stuttgart, Ark., to work on rates and other traffic problems.

Committee to Meet

OILSEEDS and peanuts research and marketing advisory committee for the U. S. Department of Agriculture will meet at Peoria, Ill., Jan. 14-16, USDA announces.

At their 1957 session, committee members will again offer guidance to the Department in its planning of future research to improve the production, marketing and utilization of oilseeds and peanuts.

USDA has invited interested organizations to submit suggestions concerning the federal program of agricultural research to the committee. Such proposals should be addressed to Dr. Barnard Joy, assistant to the administration of USDA's Agricultural Research Service, Washington 25, D. C., who will transmit them to the committee.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate 10c per word per issue. Minimum insertion $2.00.

WANTED: FLAKING AND CRACKing rolls, meal coolers and driers and rollermills. Soybean Digest, Box 319-J, Hudson, Iowa.

FOR SALE — USED SOYBEAN plant equipment. Anderson Expellers, Anderson driers, Anderson cake cooler with Rotoclone, roller mill, 125 hp boiler, filter press, motors, car mover, power shovel, legs, etc. Priced for quick sale. Williams Milling Co., Sac City, Iowa.

BELTING SALE FOR CONVEYOR and elevator legs. About all widths and plies in stock. Lengths up to 200 ft. All belts guaranteed. Advise size belt required and we will quote prices and submit samples. Prices far below market price. Corns Conveyor Belt Co., Griffith, Ind.

FOR SALE — RICHARDSON AND Fairbanks scales, Niagara vibrating screen, Buckeye engine, Titusville boiler, meal coolers, condensers, Roots-Connersville blowers, heat exchangers, hammer mills, Eureka dust collectors, pumps, valves, electric motors and electrical starting equipment, A-1 condition. Contact Lee Atherton, Archer-Daniels-Midland Co., Investors Bldg., Minneapolis, Minn.

NEW AND USED PORTABLE FEED mills. H. L. Myers, Route 3, Alliance, Ohio. Phone 7044.

IRRIGATED LEE SOYBEANS—Mississippi registered and certified. Low mechanical injury, spike-tooth harvested, low moisture—dried to 13% or less, fumigated, cleaned, treated and graded. Growing instructions furnished to purchasers of these very high quality seed. We produce only Miss. reg. and certified Lee soybeans. Buy early, get the best. Bard Selden, Hollywood, Miss.

LAUHOFF FLAKING ROLLS—Also single, double, two and three pair high roller mills. Ben Selby, 925 Montrose Ave., Chicago, Ill.

NEW PRODUCTS and SERVICES

WEEDER. A new McCormick No. 6 center-drive rod weeder, available in either 12- or 14-foot sizes, has just been announced by International Harvester Co. Operating principle of the weeder is to pull a ⅞-inch square steel rod, at a right angle to the direction of travel, just below the surface of the ground.

The rod, roller chain-driven from both main wheels of the weeder, revolves in the opposite direction to the forward movement of the machine. With the rod being pulled through the ground just below the surface and revolving at the same time, weeds are torn out by the roots and deposited on the surface to die.

The rod extends wider than the drive wheels on the weeder and eliminates wheel tracks.

Because the rod rotates under the soil surface as it does, this weeder does not work the topsoil or bury trash. Also, moist soil is not exposed to the sun and the surface is left rough and covered with the dying plant growth uprooted by the weeder.

For further information, write Soybean Digest 11a, Hudson, Iowa.

PLANTS. Bulletin No. 2515, recently published by the chemical plants division, Blaw-Knox Co., describes and illustrates "Plants and Processes for the Fats and Oils Industry." It is prepared especially for the animal and vegetable fats and oils industry.

Processes covered are extraction, refining, distillation, deodorization, fat splitting, hydrogenation, fatty-acid separation, etc.

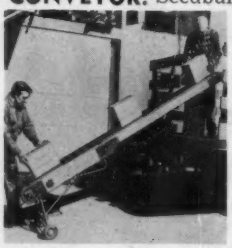
For further information write Soybean Digest, 11d, Hudson, Iowa.

CULTIVATOR. A new heavy-duty field cultivator, employing unique spring-loaded trip shanks, is announced by the tractor and implement division of Ford Motor Co.

Each shank of the new field cultivator has an individual spring-loaded trip mechanism which holds it in a fixed position, but permits the shank to swing back and upward when an obstruction or overload is encountered. The trip mechanism can be set for release at 1,500 pounds or 2,500 pounds.

For further information, write Soybean Digest 11c, Hudson, Iowa.

CONVEYOR. Seedburo Equipment Co. announces the addition of a new low-priced belt conveyor to its line of Hytrol conveyors. Called the Model A "Handy Boy," it offers many of the features found on the standard Hytrol conveyor.



To fit all the needs, "Handy Boy" is available in eight sizes ranging from 6 to 20 feet.

Lightweight and highly maneuverable, this versatile conveyor has many applications. The 10-foot model weighs only 65 pounds. Many optional accessories are available for different types of jobs.

For further information write Soybean Digest 11b, Hudson, Iowa.

IN THE MARKETS

EXPORTS. The preliminary data for the month of Au-

IN THE MARKETS

FACTORY USE VEGETABLE OILS for July and August. Reported by Bureau of the Census (1,000 lbs.)

Primary materials: Factory production and consumption, and factory and warehouse stocks, August 1956-July 1956.

Primary materials	Factory production		Factory consumption		Factory and warehouse stocks	
	August 1956	July 1956	August 1956	July 1956	Aug. 31, 1956	July 31, 1956
Cottonseed, crude	58,108	43,472	50,774	37,083	52,108	40,375
Cottonseed, refined	47,268	34,607	104,902	84,298	179,798	243,791
Soybean, crude	249,027	228,348	249,987	215,835	154,421	174,970
Soybean, refined	223,378	193,610	241,688	196,948	100,148	112,828

Factory consumption of vegtable fats and oil, by uses, during August 1956.

	Edible products			Inedible products			
	Shortening	Margarine	Other edible	Soap	Paint and varnish	Lubricants and similar oils[1]	Other inedible[2]
U. S. total	152,103	85,774	95,791	101,002	43,010	14,527	98,506
Cottonseed, refined	9,720	1,374	1,964	.....	(3)	(3)	236
Soybean, crude	.....	.....	.....	75	479	(3)	2,399
Soybean, refined	36,461	6,021	6,078	.....	7,087	37	6,626
Foots, vegetable, raw and acidulated (100% basis)	.....	.....	.....	2,693	(3)	(3)	1,046
Hydrogenated vegetable oils, edible:							
Cottonseed	13,098	16,297	.....	.....	.....	.....	.....
Soybean	24,096	55,050	1,290	.....	.....	.....	(3)
Other	2,197	.....	1,084	.....	.....	.....	.....

[1] Includes quantities consumed in lubricants, greases, cutting oils, core oils, brake fluids, and metal working. [2] Includes quantities consumed in chemicals, linoleum, oilcloth and animal feeds. [3] Not shown to avoid disclosure of figures for individual companies.

Consumption of primary and secondary fats and oils in fat splitting

	1956			1955	
	August	July	Jan.-Aug. Cumulative	August	Jan.-Aug. Cumulative
Soapstocks					
Vegetable foots	9,895	5,515	70,132	9,790	76,162

Source: U. S. Census Bureau.

STOCKS ON FARMS. Stocks of old crop soybeans on farms are estimated at about 2 million bushels, down sharply from the 3.9 million bushels on farms a year ago, and slightly below the Oct. 1 average of 2.4 million bushels, reports Agricultural Marketing Service.

Disappearance from farms during the July-September quarter amounted to only 5.2 million bushels, as farm stocks were already at a low level on July 1. With prospect of a record 1956 crop to market, there was little incentive to carry over old crop soybeans. The few remaining old soybeans on farms are widely scattered. Illinois has the largest holdings with less than one-half million bushels, followed by Iowa with around 350,000 bushels and Ohio with nearly 300,000 bushels.

Old crop soybean stocks on farms on Oct. 1 crop reporting board, AMS, USDA (1,000 bu.)

State	Average 1945-54	1955	1956	State	Average 1945-54	1955	1956
N. Y.	8	7	4	Del.	11	8	10
N. J.	9	3	3	Md.	20	39	16
Pa.	25	14	11	Va.	26	14	20
Ohio	304	421	292	N. C.	52	15	25
Ind.	229	465	219	S. C.	12	15	27
Ill.	540	891	492	Ga.	2	2	7
Mich.	24	1	1	Fla.	1	1	1
Wis.	1	10	10	Ky.	14	11	12
Minn.	199	421	220	Tenn.	18	14	9
Iowa	500	1,128	349	Ala.	5	3	22
Mo.	225	53	102	Miss.	14	10	24
N. Dak.	4	30	12	Ark.	38	55	44
S. Dak.	19	122	28	La.	4	6	1
Nebr.	5	162	1	Okla.	3	2	1
Kans.	41	10	17	Texas	.....	1	1
				U. S.	2,364	3,931	1,975

[1] Less than 500 bushels.

MEAL, OIL EXPORTS. The large U. S. exports of soybean oil in relation to cottonseed oil continue to reflect the erstwhile record 1955 soybean crop and the exhaustion of CCC-held supplies of cottonseed oil, reports USDA's Foreign Crops and Markets.

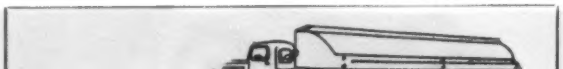
U. S. exports of soybean oil in August were more than seven times the volume of August 1955. The 8-month total was more than 10 times greater than January-August 1955 shipments.

The cumulative 8-month total of cottonseed oil shipments was running 12% above the comparable 1955 period.

Cake and meal exports in August were down nearly 20% from August 1955, though the cumulative total was still over one-fourth ahead of last year's. The sizable decline in shipments of cottonseed cake and meal below the 1955 level is more than offset by the substantial rise in exports of linseed and soybean cakes and meals.

Cottonseed oil, soybean oil, oilcakes and meals: Preliminary estimates of U. S. exports in August and January-August 1956, and actual exports, August and January-August 1955.

Commodity	1955 August	1955 Jan.-Aug. (Actual)	1956 August	1956 Jan.-Aug. (Estimated)
	Million pounds			
Cottonseed oil, refined	6.2	244.8	9.3	209.1
Cottonseed oil, refined and further processed	16.9	85.8	7.2	100.9
Cottonseed oil, crude	2.1	68.6	6.2	135.6
Total cottonseed oil	25.2	399.2	22.7	445.6
Soybean oil, refined	6.6	18.9	6.5	48.5
Soybean oil, refined and further processed	2.7	12.2	56.6	276.0
Soybean oil, crude	0.4	3.3	9.3	61.2
Total soybean oil	9.7	34.4	72.4	385.7
	Thousand short tons			
Cottonseed cake and meal	20.8	98.4	1.9	35.9
Linseed cake and meal	13.2	32.1	14.1	72.7
Soybean cake and meal	23.0	134.0	30.3	228.5
Total cake and meal	57.0	264.5	46.3	337.1



STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday and Saturday preceding date of report (1,000 bu.)

EXPORTS. The preliminary data for the month of August 1956, with comparable data for August 1955 and a cumulative total of soybeans and soybean oil for the marketing years 1954-55 and 1955-56, by Foreign Agricultural Service, U. S. Department of Agriculture.

	Unit	August 1955	August 1956	October-August 1954-55	October-August 1955-56
Soybeans	bu.	3,498,311	1,445,478	56,642,333	64,000,717
Soybean oil:					
Crude	lb.	434,369	9,413,290	13,249,034	66,127,289
Refined but not further processed	lb.	6,607,182	6,110,341	22,404,010	58,379,377
Refined, deodorized and hydrogenated	lb.	2,705,297	59,093,552	12,475,462	361,253,739
Total beans and oil, bean equivalent basis	bu.	4,436,890	8,597,519	61,216,220	110,534,268

Soybeans: Inspections for overseas export by ports and country of destination Sept. 17-Oct. 12, Reported by Agricultural Marketing Service (bushels)

	Baltimore	New Orleans	Mobile	Port Allen, La.	Total
Holland	37,333	1,036,385	106,492	18,666	1,198,876
France		140,000			140,000
Germany		943,328	92,492		1,035,820
Belgium		18,666	14,000		32,666
Norway		74,667			74,667
Total	37,333	2,213,046	212,984	18,666	2,482,029

Soybeans: Inspections for overseas export by coastal areas and country of destination, September 1956 (1,000 bu.)

Country	Soybeans	Country	Soybeans
Atlantic		Japan	1
Holland	19	France	140
Belgium	19	Subtotal	1,032
Germany	37	Grand total	1,107
Subtotal	75	Total January-September 1956	29,578
Gulf		Total January-September 1955	30,027
Holland	402		
Germany	489		

NOTE: Data are based on weekly reports of inspections by licensed grain inspectors for overseas export and do not include shipments to Canada or Mexico. In some cases the ultimate destination of the grain exported is not shown on the inspection reports, therefore, the quantity of each country may vary from official census data which are based on custom declarations.

SUPPLY AND DISTRIBUTION of the 1949-55 soybean crops, reported by Agricultural Marketing Service (mil. bu.)

Item	1949	1950	1951	1952	1953	1954	1955[1]	1956
				Year beginning October				
Supply								
Stocks, Oct. 1	3.2	2.9	4.2	3.6	10.1	1.3	10.0	5
Production	234.2	299.2	283.8	298.8	269.2	341.1	371.1	462
Total supply	237.4	302.2	287.9	302.4	279.3	342.4	381.1	467[2]
Disposition								
Crushed	195.3	252.0	244.3	234.4	213.2	249.0	283	
Exports	13.1	27.8	17.0	31.9	39.7	60.5	67	
Seed and feed	21.5	20.8	21.6	22.4	24.8	25.9	29	
Residual[3]	4.6	-2.6	1.4	3.6	.4	-2.9	-3	
Price per bushel	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Support	2.11	2.06	2.45	2.56	2.56	2.22	2.04	2.15
Received by farmers	2.16	2.47	2.73	2.72	2.73	2.46	2.20	
Price and value of products								
Meal, per ton[4]	64.30	64.44	83.33	67.57	78.63	60.70	52.50	
		Ct.	Ct.	Ct.	Ct.	Ct	Ct.	Ct.
Oil, per pound[5]		12.3	17.8	11.3	12.1	13.5	11.9	12.5
		Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Combined value[6]		2.77	3.26	3.12	2.95	3.38	2.72	2.60

[1] Partly estimated. [2] Forecast. [3] Includes fed to livestock on farms other than where produced, direct use for food and statistical discrepancies. [4] Bulk, Decatur. [5] Crude, tank cars, f.o.b., Midwest mills. [6] Combined (weighted) value of products per bushel crushed. Not directly comparable with U. S. average soybean prices.

PRICE SUPPORT. 1956 and 1955-crop soybeans put under price support through Sept. 15 (1,000 bu.)

1956-crop				1955-crop
Warehouse-Stored	Farm-Stored	Purchase Agreement	Total	Total
7	0	0	7	2

STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday and Saturday preceding date of report (1,000 bu.)

	Oct. 2	Oct. 9	Oct. 16	Oct. 23
U. S. soybeans in store and afloat at domestic markets				
Atlantic Coast	94	98	115	279
Gulf Coast	841	588	1,790	1,474
Northwestern and Upper Lake	10	53	473	1,149
Lower Lake	3,472	6,254	8,998	10,602
East Central	2,436	3,236	4,467	4,789
West Central				
Southwestern & Western	228	515	1,103	1,543
Total current week	7,081	10,744	16,946	19,836
Total year ago	5,190	6,883	8,824	12,949
U. S. soybeans in store and afloat at Canadian markets				
Total current week	52	13	0	31
Total year ago	71	57	46	229
Total North American commercial soybean stocks				
Current week	7,133	10,757	16,946	19,867
Year ago	5,261	6,940	8,870	13,178

Primary receipts (1,000 bu.) of soybeans at important interior points for week ending:

City	Sept. 28	Oct. 5	Oct. 12	Oct. 19
Chicago	2,275	3,707	3,257	2,027
Duluth	—	—	16	110
Indianapolis	818	754	557	515
Kansas City	866	984	820	438
Milwaukee	—	—	—	3
Minneapolis	43	271	898	729
Omaha	4	78	335	313
Peoria	230	251	261	85
Sioux City	19	124	305	168
St. Joseph	232	295	342	225
St. Louis	371	491	405	318
Toledo	142	481	831	988
Totals	5,000	7,436	8,027	5,919
Last week	2,247	5,000	7,436	8,027
Last year	4,416	5,051	5,522	7,140
Total Chicago soybean stocks	3,451	5,979	8,373	9,650

INSPECTIONS. Soybeans, inspected receipts by grades and percent, as reported by Agricultural Marketing Service.[1]

	Oct.-Sept. 1954-55		Oct.-Sept. 1955-56		September 1955		August 1956		September 1956[2]	
Grade	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1	62,218	21	63,575	21	11,259	27	684	18	7,241	21
No. 2	147,919	51	145,394	49	19,231	45	1,870	51	15,463	45
No. 3	55,465	19	61,095	20	7,486	18	708	19	7,303	22
No. 4	17,117	6	23,065	8	3,502	8	283	8	3,423	10
Sample	7,671	3	6,822	2	776	2	155	4	717	2
Total	290,390	100	299,951	100	42,254	100	3,700	100	34,147	100

[1] Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,750 bushels. [2] Of the September 1956 receipts, 400 bushels were black, and the remainder yellow soybeans. Inspections of soybeans in September included 2,247,500 bushels as cargo lots, 2,053,058 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

SWEDEN. The Swedish Agricultural Marketing Board in Circular No. 43 of Aug. 17 announced that licenses may be granted upon application until further notice for imports of soybeans and oil cakes and meal from the dollar area against payments in regular dollars, reports USDA's Foreign Crops and Markets.

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